

Acer Aspire 4333/4733Z

Service Guide

Service guide files and updates are available
on the ACER/CSD web; for more information,
please refer to <http://csd.acer.com.tw>

Revision History

Please refer to the table below for the updates made on this service guides.

Date	Chapter	Updates

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Conventions

The following conventions are used in this manual:

SCREEN MESSAGES	Denotes actual messages that appear on screen.
NOTE	Gives bits and pieces of additional information related to the current topic.
WARNING	Alerts you to any damage that might result from doing or not doing specific actions.
CAUTION	Gives precautionary measures to avoid possible hardware or software problems.
IMPORTANT	Reminds you to do specific actions relevant to the accomplishment of procedures.

 **NOTE: This symbol where placed in the Service Guide designates a component that should be recycled according to the local regulations.**

Preface

Before using this information and the product it supports, please read the following general information.

1. This Service Guide provides you with all technical information relating to the **BASIC CONFIGURATION** decided for Acer's "global" product offering. To better fit local market requirements and enhance product competitiveness, your regional office **MAY** have decided to extend the functionality of a machine (e.g. add-on card, modem, or extra memory capability). These **LOCALIZED FEATURES** will **NOT** be covered in this generic service guide. In such cases, please contact your regional offices or the responsible personnel/channel to provide you with further technical details.
2. Please note **WHEN ORDERING FRU PARTS**, that you should check the most up-to-date information available on your regional web or channel. If, for whatever reason, a part number change is made, it will not be noted in the printed Service Guide. For **ACER-AUTHORIZED SERVICE PROVIDERS**, your Acer office may have a **DIFFERENT** part number code to those given in the FRU list of this printed Service Guide. You **MUST** use the list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

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System Specifications

Features

Below is a brief summary of the computer's many features:

NOTE: Items denoted with an (*) are only available for selected models.

Operating system

- Genuine Windows® 7 Home Premium 64-bit
- Genuine Windows® 7 Home Basic 64-bit

System memory

- Dual-channel DDR3 SDRAM support:
 - Up to 4 GB of DDR3 system memory, upgradable to 8 GB using two soDIMM modules

CPU and chipset

- Aspire 4333
 - Intel® Celeron® processor T3500 (1 MB L2 cache, 2.10 GHz, 800 MHz FSB, 35 W) supporting Intel® 64 architecture
 - Intel® Celeron® processor 900 (1 MB L2 cache, 2.20 GHz, 800 MHz FSB, 35 W) supporting Intel® 64 architecture
 - Mobile Intel® GL40 Express Chipset
- Aspire 4733Z
 - Intel® Pentium® processor PMDT4500 (1 MB L2 cache, 2.30 GHz, 800 MHz FSB, 35 W) supporting Intel® 64 architecture
 - Mobile Intel® GL40 Express Chipset

Graphics

- Mobile Intel® GL40 Express Chipset with integrated 3D graphics, featuring Intel® Graphics Media Accelerator 4500M (Intel® GMA 4500M) with up to 1759 MB of Intel® Dynamic Video Memory Technology 5.0 (64 MB of dedicated system memory, up to 1695 MB of shared system memory), supporting Microsoft® DirectX® 10
- Dual independent display support
- 16.7 million colors
- External resolution / refresh rates:
 - VGA port up to 2048 x 1536: 60 Hz
 - HDMI™ port up to 1728 x 1080: 60 Hz
- MPEG-2/DVD decoding
- WMV9 (VC-1) and H.264 (AVC) decoding
- HDMI™ (High-Definition Multimedia Interface) with HDCP (High-bandwidth Digital Content Protection) support

Display

- 14" HD 1366 x 768 pixel resolution, high-brightness (200-nit) Acer CineCrystal™ LED-backlit TFT LCD
- Mercury free, environment friendly
- 16:9 aspect ratio

Audio

- Built-in speaker
- High-definition audio support
- Built-in microphone
- MS-Sound compatible

Storage

- Hard disk drive
 - 160/250/320/500/640/750 GB or larger
- Multi-in-1 card reader, supporting:
 - Secure Digital™ (SD) Card and MultiMediaCard™ (MMC)

Webcam

- Acer Video Conference, featuring:
 - Acer Crystal Eye 1.3 MP webcam, 1280 x 1024 resolution

Wireless and networking

- WLAN:
 - Acer InviLink™ Nplify™ 802.11b/g/n Wi-Fi CERTIFIED™
 - Acer InviLink™ 802.11b/g Wi-Fi CERTIFIED™ 802.11b/g/n Wi-Fi CERTIFIED™
 - Supporting Acer SignalUp™ wireless technology
- WPAN:
 - Bluetooth® 3.0+HS
 - Bluetooth® 2.1+EDR
- LAN: Gigabit Ethernet, Wake-on-LAN ready

Privacy control

- BIOS user, supervisor, HDD passwords
- Kensington lock slot

Dimensions and weight

- Dimensions
 - 341 (W) x 264.5 (D) x 26.7/33.5 (H) mm (13.43 x 10.41 x 1.05/1.32 inches)
- Weight
 - 2.5 kg (5.51 lbs.) with 6-cell battery pack

Power adapter and battery

- ACPI 3.0 CPU power management standard: supports Standby and Hibernation power-saving modes

Power adapter

- 3-pin 65 W AC adapter:
 - 108 (W) x 46 (D) x 29.5 (H) mm (4.25 x 1.81 x 1.16 inches).
 - 225 g (0.49 lbs.) with 180 cm DC cable

Battery

- 48 W 4400 mAh 6-cell Li-ion standard battery pack
- Battery life: 3 hours
- ENERGY STAR®

Input and control

- Keyboard
 - 86-/87-/91-key Acer FineTip keyboard with international language support
- Touchpad
 - Multi-gesture Touchpad, supporting two-finger scroll, pinch, rotate, flip
- Media keys
 - Media control keys (printed on keyboard): play/pause, stop, previous, next, volume up, volume down

I/O interface

- 2-in-1 card reader (SD™, MMC)
- Three USB 2.0 ports
- HDMI™ port with HDCP support
- External display (VGA) port
- Headphone/speaker/line-out jack
- Microphone-in jack
- Ethernet (RJ-45) port
- DC-in jack for AC adapter

Software

- Productivity
 - Acer Backup Manager
 - Acer ePower Management
 - Acer eRecovery Management
 - Adobe® Flash® Player 10.1
 - Adobe® Reader® 9.1
 - eSobi™
 - Microsoft® Office 2010 preloaded (purchase a product key to activate)
 - Microsoft® Office Starter 2010
 - Norton™ Online Backup
- Security
 - McAfee® Internet Security Suite Trial
 - MyWinLocker®
- Multimedia
 - Cyberlink® PowerDVD™
 - NTI Media Maker™
- Gaming
 - Oberon GameZone
 - WildTangent®
- Communication and ISP
 - Acer Crystal Eye
 - Microsoft® Silverlight™
 - Skype™
 - Windows Live™ Essentials — Wave 3.2 (Mail, Photo Gallery, Live™ Messenger, Movie Maker, Writer)
- Web links and utilities
 - Acer Accessory Store
 - Acer Identity Card
 - Acer Registration
 - Acer Updater
 - eBay® shortcut 2009
 - Netflix shortcut

Optional Items

- 1/2/4 GB DDR3 soDIMM module
- 6-cell Li-ion battery pack
- 3-pin 90 W AC adapter

Warranty

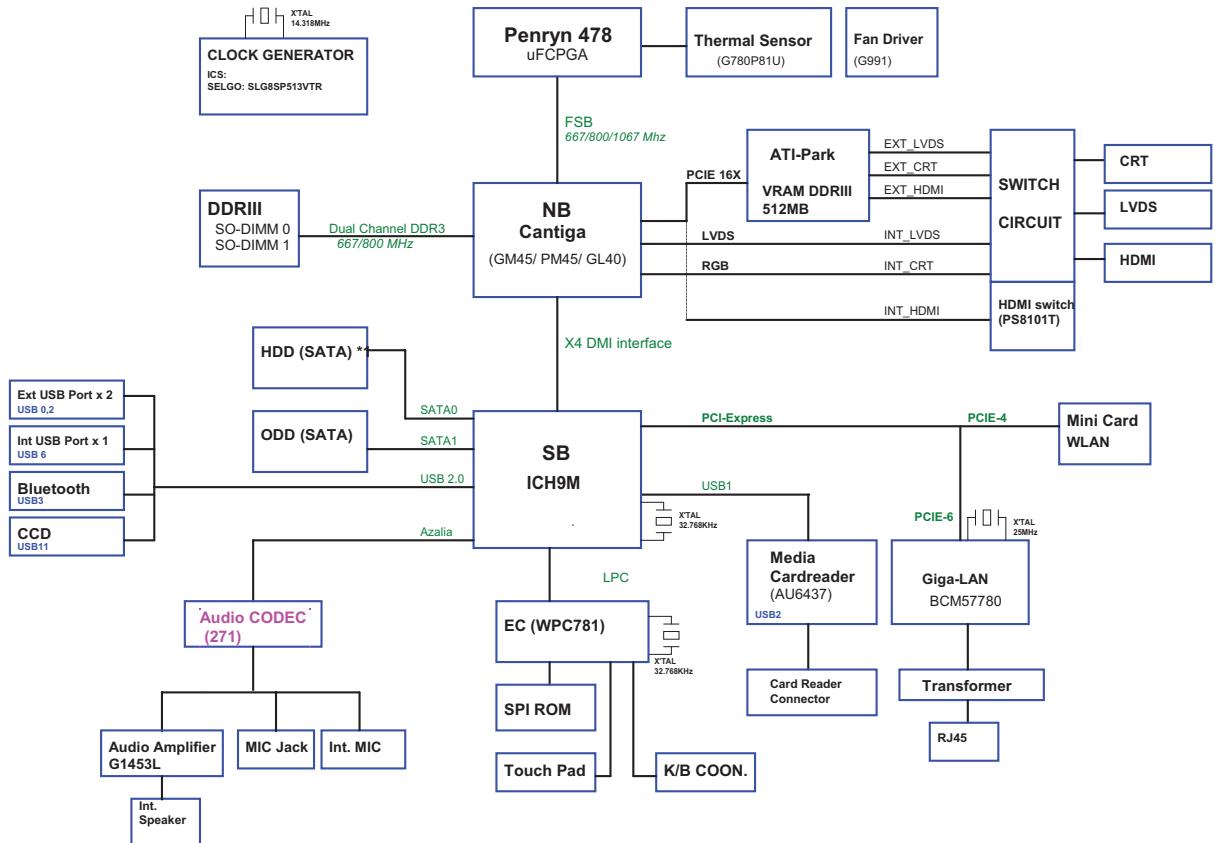
- One-year International Travellers Warranty (ITW)

Environment

- Temperature:
 - Operating: 41 °F to 95 °F (5 °C to 35 °C)
 - Non-operating: -4 °F to -149 °F (20 °C to 65 °C)
- Humidity (non-condensing):
 - Operating: 20% to 80%
 - Non-operating: 20% to 80%

NOTE: The specifications listed above are for reference only. The exact configuration of the PC depends on the model purchased.

System Block Diagram



Your Acer Notebook tour

Top View



#	Icon	Item	Description
1		Acer Crystal Eye webcam	Web camera for video communication. (only for certain models)
2		Display screen	Also called Liquid-Crystal Display (LCD), displays computer output (configuration may vary by model).
3		Power button	Turns the computer on and off.
4		Keyboard	For entering data into your computer
5		Touchpad	Touch-sensitive pointing device which functions like a computer mouse.
6		Click buttons (left, and right)	The left and right buttons function like the left and right mouse buttons.
7		Microphone	Internal microphone for sound recording.

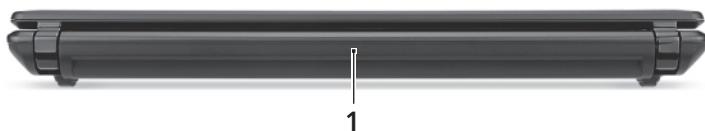
#	Icon	Item	Description
8		Power indicator	Indicates the computer's power status.
		Battery indicator	Indicates the computer's battery status. 1. Charging: The light shows amber when the battery is charging. 2. Fully charged: The light shows blue when in AC mode.
		HDD indicator	Indicates when the hard disk drive is active.
		Communication indicator	Indicates the computer's wireless connectivity device status.
9		Palmrest	Comfortable support area for your hands when you use the computer.
10		Speaker	Delivers audio output.

Closed Front View



No.	Icon	Item	Description
1		Microphone jack	Accepts inputs from external microphones.
		Headphone/speaker/line-out jack	Connects to audio line-out devices (e.g., speakers, headphones).
2		2-in-1 card reader	Accepts Secure Digital (SD), MultiMediaCard (MMC). Note: Push to remove/install the card. Only one card can operate at any given time.

Rear view



No.	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.

Left View



No.	Icon	Item	Description
1		Kensington lock slot	Connects to a Kensington-compatible computer security lock. Note: Wrap the computer security lock cable around an immovable object such as a table or handle of a locked drawer. Insert the lock into the notch and turn the key to secure the lock. Some keyless models are also available.
2		DC-in jack	Connects to an AC adapter.
3		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
4		External display (VGA) port	Connects to a display device (e.g., external monitor, LCD projector).
5		Ethernet (RJ-45) port	Connects to an Ethernet 10/100/1000-based network.
6		HDMI port	Supports high-definition digital video connections.
7		USB 2.0 port	Connects to USB 2.0 devices (e.g., USB mouse, USB camera).

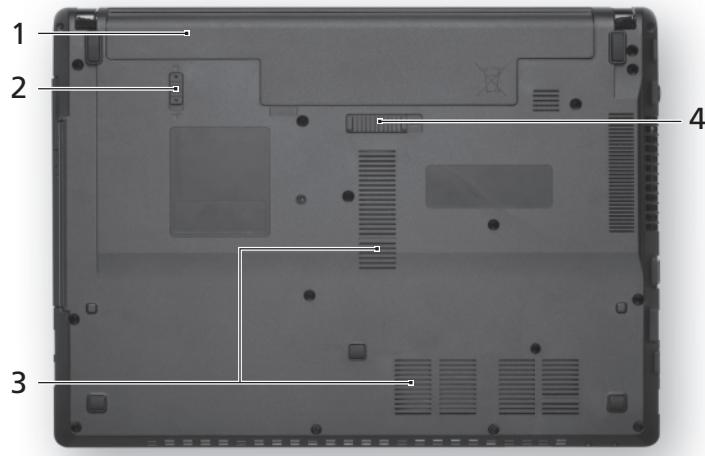
Right View



No.	Icon	Item	Description
1		USB 2.0 ports	Connect to USB 2.0 devices (e.g., USB mouse, USB camera).
2		Optical drive	Internal optical drive; accepts CDs or DVDs.
3		Optical disk access indicator	Lights up when the optical drive is active.
4		Optical drive eject button	Ejects the optical disk from the drive.

No.	Icon	Item	Description
5		Emergency eject hole	Ejects the optical drive tray when the computer is turned off. Note: Insert a paper clip to the emergency eject hole to eject the optical drive tray when the computer is off.

Base View



No.	Icon	Item	Description
1		Battery bay	Houses the computer's battery pack.
2		Battery lock	Locks the battery in position.
3		Ventilation slots	Enable the computer to stay cool, even after prolonged use.
4		Battery release latch	Releases the battery for removal.

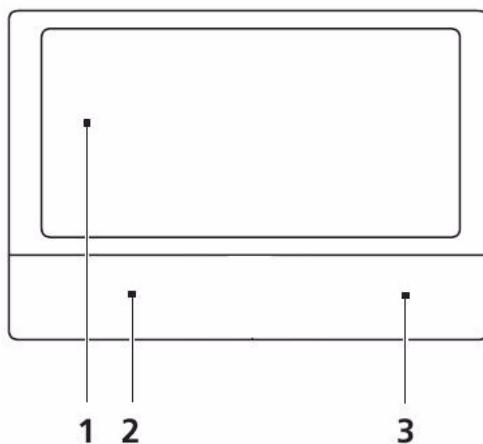
Indicators

The computer has several easy-to-read status indicators.

Icon	Function	Description
	Power	Indicates the computer's power status.
	Battery	Indicates the computer's battery status. NOTE: 1. Charging: The light shows amber when the battery is charging. 2. Fully charged: The light shows green when in AC mode.
	HDD	Indicates when the hard disk drive is active.
	Communication indicator	Indicates the computer's wireless connectivity device status.

Touchpad Basics

The following items show you how to use the Touchpad:



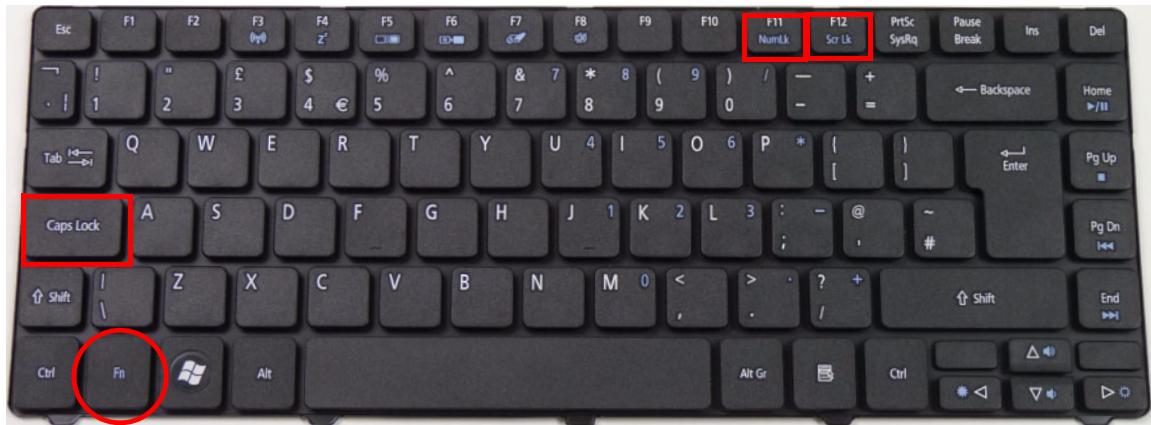
- Move your finger across the Touchpad (1) to move the cursor.
- Press the left (2) and right (3) buttons located beneath the Touchpad to perform selection and execution functions. These two buttons are similar to the left and right buttons on a mouse. Tapping on the Touchpad is the same as clicking the left button.

Function	Left Button (2)	Right Button (3)	Main Touchpad (1)
Execute	Quickly click twice.		Tap twice (at the same speed as double-clicking a mouse button).
Select	Click once.		Tap once.
Drag	Click and hold, then use finger on the Touchpad to drag the cursor.		Tap twice (at the same speed as double-clicking a mouse button); rest your finger on the Touchpad on the second tap and drag the cursor.
Access context menu		Click once.	

NOTE: When using the Touchpad, keep it - and your fingers - dry and clean. The Touchpad is sensitive to finger movement; hence, the lighter the touch, the better the response. Tapping too hard will not increase the Touchpad's responsiveness.

Using the Keyboard

The keyboard has full-sized keys and an embedded numeric keypad, separate cursor, lock, Windows, function and special keys.



Lock Keys and embedded numeric keypad

The keyboard has two lock keys which you can toggle on and off.

Lock key	Description
Caps Lock	When Caps Lock is on, all alphabetic characters typed are in uppercase.
<Fn> + <F11>	When Num Lock is on, the embedded keypad is in numeric mode.
<Fn> + <F12>	When Scroll Lock is on, the screen moves one line up or down when you press the up or down arrow keys respectively. Scroll Lock does not work with some applications.

Windows Keys

The keyboard has two keys that perform Windows-specific functions.

Key	Description
 Windows key	<p>Pressed alone, this key has the same effect as clicking on the Windows Start button; it launches the Start menu. It can also be used with other keys to provide a variety of functions:</p> <ul style="list-style-type: none">< >: Open or close the Start menu< > + <D>: Display the desktop< > + <E>: Open Windows Explore< > + <F>: Search for a file or folder< > + <G>: Cycle through Sidebar gadgets< > + <L>: Lock your computer (if you are connected to a network domain), or switch users (if you're not connected to a network domain)< > + <M>: Minimizes all windows< > + <R>: Open the Run dialog box< > + <T>: Cycle through programs on the taskbar< > + <U>: Open Ease of Access Center< > + <X>: Open Windows Mobility Center< > + <BREAK>: Display the System Properties dialog box< > + <SHIFT+M>: Restore minimized windows to the desktop< > + <TAB>: Cycle through programs on the taskbar< > + <SPACEBAR>: Bring all gadgets to the front and select Windows Sidebar<CTRL> + < > + <F>: Search for computers (if you are on a network)<CTRL> + < > + <TAB>: Use the arrow keys to cycle through programs on the taskbar <p>Note: Depending on your edition of Windows, some shortcuts may not function as described.</p>

Hot Keys

The computer employs hotkeys or key combinations to access most of the computer's controls like screen brightness, volume output and the BIOS utility.

To activate hot keys, press and hold the **<Fn>** key before pressing the other key in the hotkey combination.



Hotkey	Icon	Function	Description
<Fn> + <F3>	()	Communication key	Enables / disables the computer's communication devices. (Communication devices may vary by configuration.)
<Fn> + <F4>		Sleep	Puts the computer in Sleep mode.
<Fn> + <F5>		Display toggle	Switches display output between the display screen, external monitor (if connected) and both.
<Fn> + <F6>		Display Off	Turns the display screen backlight off to save power. Press any key to return.
<Fn> + <F7>		Touchpad toggle	Turns the internal Touchpad on and off.
<Fn> + <F8>		Speaker toggle	Turns the speakers on and off.
<Fn> + <△>		Brightness up	Increases the screen brightness.
<Fn> + <▽>		Brightness down	Decreases the screen brightness.
<Fn> + <△>		Volume up	Increases the sound volume.
<Fn> + <▽>		Volume down	Decreases the sound volume.
<Fn> + <Home>		Play/Pause	Play or pause a selected media file.
<Fn> + <Pg Up>		Stop	Stop playing the selected media file.
<Fn> + <Pg Dn>		Previous	Return to the previous media file.
<Fn> + <End>		Next	Jump to the next media file.

Hardware Specifications and Configurations

Processor

Item	Specification
CPU	Intel Penryn Processor
Type	35W CPU
CPU Package	Micro-Flip-Chip Pin Grid Array (FC-mPGA), 479 BGA socket.
Power	IMVP-6
On-die Cache	4-MB/6-MB second level cache
Front Side Bus	667/800/1066 MHz

Processor Specifications (Aspire 4333)

Item	CPU Speed	Cores	Bus Speed (MHz)	Mfg. Tech	Cache Size	Core Voltage	P/N
CMT3500	2.1 G	2	800	Micro-FCPGA	1 M	35W	KC.35001.CMT
CM900	2.2 G	2	800	Micro-FCPGA	1 M	35W	KC.N0001.900

Processor Specifications (Aspire 4733Z)

Item	CPU Speed	Cores	Bus Speed (MHz)	Mfg. Tech	Cache Size	Core Voltage	P/N
PMDT4500	2.3 G	2	800	Micro-FCPGA	1 M	35W	KC.45001.DTP

Northbridge

Item	Specification
Chipset	Cantiga (GL40)
Package	1299 pins Micro-FCBGA (35 x 35 mm)
Features	<ul style="list-style-type: none"> Penryn processor support Supports Dual Channel DDR3 SDRAM, Memory Size 128MB ~ 8GB. Integrated VGA Direct Media I/F (DMI), between GMCH and ICH9-M Chipset connection.

Southbridge

Item	Specification
Chipset	ICH9-M
Package	652 pins BGA (31 x 31 mm)
Features	<ul style="list-style-type: none"> Six PCI Express root ports supported Support Serial ATA I/F LAN controller via LAN connect interface (LCI)

CPU Fan True Value Table (TJ105)

Fan On (Celsius)	Fan Off (Celsius)	RPM
35	30	2500
45	40	2900
55	50	3200
65	60	3500
75	70	3800

Throttling 50%: On= 100°C; OFF=90°C

OS shut down at 105°C; H/W shut down at 105°C

CPU Fan True Value Table (TJ90)

Fan On (Celsius)	Fan Off (Celsius)	RPM
35	30	2500
45	40	2900
55	50	3200
65	60	3500
75	70	3800

Throttling 50%: On= 85°C; OFF=80°C

OS shut down at 90°C; H/W shut down at 90°C

System Memory

Item	Specification
Memory controller	NB Cantiga- GM
Memory size	0MB (no on-board memory)
DIMM socket number	2 sockets
Supports memory size per socket	2 GB
Supports maximum memory size	4 GB
Supports DIMM type	JEDEC 204-pin DDR3-800/1066 SODIMM for PC3-10600/ PC3-8500/ PC3-6400
Supports DIMM speed	1.87ns @ CL = 7 (DDR3-1066) 1.87ns @ CL = 8 (DDR3-1066) 2.5ns @ CL = 5 (DDR3-800) 2.5ns @ CL = 6 (DDR3-800)
Supports DIMM voltage	1.5V +/- 0.075V
Supports DIMM package	204-pin SODIMM, 67.75"x 30.15"x 3.8"(Max)
Memory module combinations	You can install memory modules in any combinations as long as they match the above specifications.

System Board Major Chips

Item	Specification
Core logic	Northbridge: Cantiga (GL40) Southbridge: ICH9M
VGA	ATI-Park
LAN	BCM57780
USB 2.0	ICH9-M
Super I/O controller	ICH9-M
Bluetooth	ICH9-M
Wireless	ICH9-M

Item	Specification
PCMCIA	N/A
Audio codec	ALC271
Card reader	AU6437

BIOS

Item	Specification
BIOS vendor	Phoenix
BIOS Version	1.00
BIOS ROM type	SST 25VF160B, 8Mbit CMOS Boot Block Flash Memory
Features	<ul style="list-style-type: none"> • Flash ROM 2MB • Suspend to RAM (S3)/Disk(S4) • Various hot-keys for system control • Support SMBIOS 2.3, PCI2.2 • Refer to Acer BIOS specification • DMI utility for BIOS serial number configurable/asset tag • Support PXE • Support Y2K solution • Support WinFlash • Wake on LAN form S3 • Wake on LAN from S4 in AC mode • System information

Memory Combinations

Slot 1	Slot 2	Total Memory
0MB	1024MB	1024MB
0MB	2048MB	2048MB
0MB	4096MB	4096MB
1024MB	0MB	1024MB
1024MB	512MB	1536MB
1024MB	1024MB	2048MB
1024MB	2048MB	3072MB
2048MB	0MB	2048MB
2048MB	512MB	2560MB
2048MB	1024MB	3072MB
2048MB	2048MB	4096MB

Wireless Module 802.11b/g/Draft-N

Item	Specification			
Manufacturer	Foxconn			
Model	43225	HB95	HB97	HB97
Supported Standards	IEEE 802.11b/g/n	IEEE 802.11b/g	IEEE 802.11b/11g	IEEE 802.11b/g/n

LAN Interface

Item	Specification
Part Name	BCM57780
Package	64pin QFN
Features	Supports 10/100/1000 Mb/s
Interface	PCI-Express

Bluetooth Interface

Item	Specification
Chipset	<ul style="list-style-type: none">Foxconn Bluetooth BCM2046Foxconn Bluetooth BCM2070Foxconn Bluetooth AR3011
Radio Technology	FHSS
Operating Frequency	2402 ~ 2480MHz ISM band
Channel Numbers	79 channels with 1MHz BW
Transmitter Output Power	-6~4dBm output power for class2 operation
Receiver Sensitivity	-75dBm @ 0.1% BER (Max)
Maximum Receiver Signal	-10dBm
Operating Voltage	3.3V+/-0.3V
Interface	USB 2.0
Protocol	BCM2046: BT2.1+EDR BCM2070: BT2.1+EDR; supports BT3.0+HS after driver upgrade AR3011: BT2.1+EDR; supports BT3.0+HS after driver upgrade
Connector type	BCM2046: 8 pin USB2.0 with JST SM08B-SURS-TF BCM2070: 6 pin JST SM06B-XSRK-ETB (HF) AR3011: SM08B-SURS-TF(LF)(SN) JST

3G Module (Not available with this model)

Item	Specification
Manufacturer	
Model	
Card Type	
Throughput	
Supported Services	

Speaker

Item	Specification
Vendor	Vansonic Enterprise Co., Ltd.
Module No.	PB2814KN04-9LB
Power Rating	Normal 1 W, Maximum 1.5 W
Output Sound Pressure Level	82 ± 3 db
Response FO	700 -/+ 20% Hz
Distortion	5% MAX

Hard Disk Drive Interface

Item	Specification							
Capacity (GB)	160				250			
Vendor & Model Name	Seagate ST9160314AS HGST HTS545016B9A300 Toshiba MK1665GSX WD WD1600BEVT-22A23T0				Seagate ST9250315AS HGST HTS545025B9A300 Toshiba MK2565GSX WD WD2500BEVT			
Bytes per sector	512							
Data heads	2		1		2		3	2
Drive Format								
Disks	1		1		1		2	1
Spindle speed (RPM)	5400							
Performance Specifications								
Buffer size	8 MB							
Interface	SATA							
Max. Media Transfer Rate (Mbytes/sec max.)	300	300		300	300	300	384	300
Max. Data Transfer Rate (Mbytes/sec)	1175	875		10854 4	1175	875	1031	1085 44
DC Power Requirements								
Voltage tolerance	5V ±5%							

Hard Disk Drive Interface (continued)

Item	Specification							
Capacity (GB)	320				500			
Vendor & Model Name	Seagate ST9320310AS HGST HTS545032B9A300 Toshiba MK3265GSX WD WD3200BPVT-22ZEST0				Seagate ST9500325AS HGST HTS545050B9A300 Toshiba MK5065GSX WD WD5000BEVT-22A0RT0			
Bytes per sector	512							
Data heads	3		2	2		4		2
Drive Format								
Disks	2	2		1		1	2	2
Spindle speed (RPM)	5400							
Performance Specifications								
Buffer size	8 MB							
Interface	SATA							
Max. Media Transfer Rate (Mbytes/sec max.)	300	300	384	300	300	300	384	300
Max. Data Transfer Rate (Mbytes/sec)	1175	11200 0	1273	10854 4	1175	112000	1031	1085 44

Item	Specification
DC Power Requirements	
Voltage tolerance	5V ±5%

Hard Disk Drive Interface (continued)

Item	Specification	
Capacity (GB)	640	750
Vendor & Model Name	Toshiba MK6465GSX Western Digital WD6400BEVT-22A0RT0	Western Digital WD7500BPVT-22HXZT1
Bytes per sector	512	
Data heads	4	4
Drive Format		
Disks	2	1
Spindle speed (RPM)	5400	
Performance Specifications		
Buffer size	8 MB	
Interface	SATA	
Max. Media Transfer Rate (Mbytes/sec max.)	300	
Max. Data Transfer Rate (buffer to/from media) (Mbytes/sec)	1273, 108544	108544
DC Power Requirements		
Voltage tolerance	5V ±5%	

USB Port

Item	Specification
Chipset	ICH9-M
USB compliance level	USB 2.0
EHCI	USB 1.1 and USB 2.0 Host controller
Number of USB port(s)	3
Location	2 on the right, 1 on the left
Serial port function control	ICH9-M

Audio Subsystem

Item	Specification
Audio Controller	Realtek ALC271
Chipset	ICH9-M
Speaker Amplifier	G1453R41U
Audio port	
Internal	
Compatibility	<ul style="list-style-type: none">Analog jacks (port-A, B, C, E and G) support stereo input and output re-taskingSupport MONO output at port -HPort-A/D/E/F built in headphone amplifiersSupports external PCBEEP input and built -in digital BEEP generatorMeets Microsoft WLP (Windows Logo Program) audio requirements
Sampling rate	Primary 16/20/24-bit Secondary 16/20/24-bit
External	Mic jack Headphone/speaker/line-out jack
Internal speaker/quantity	Yes/1 (1W speakers)

Video Interface

Item	Specification
Chipset	Integrated GL40 (Cantiga GM Chip) / ATI-Park
Package	34 mm X 34 mm, 0.7-mm ball pitch
Interface	LVDS / CRT
Compatibility	1366x768/60Hz(16:9) / 1280x720/60Hz(16:9) / 1024x768/60Hz(4:3) / 800x600/60Hz(4:3)
Sampling rate	60Hz

VRAM (Not available with this model)

Item	Specification
Chipset	
Memory size	
Interface	

HDMI Port

Item	Specification
Compliance level	1.3 compliant
Throughput	Up to 2.5Gbps per lane (250MHz pixel clock)
Number of HDMI port(s)	1
Location	Left side

PCMCIA Port (Not available in this model)

Item	Specification
PCMCIA controller	
Supports card type	
Number of slots	
Access location	
Supports ZV (Zoomed Video) port	
Supports 32-bit CardBus	

Super-Multi Drive Module

Item	Specification			
Vendor & model name	HLDs GT32N			Panasonic UJ8A0PSNAA-A
Performance Specification	With CD Diskette	With DVD Diskette	With CD Diskette	With DVD Diskette
Transfer rate (MB/sec)	Sustained: 3.6 MB/s (24x) max.	Sustained: 11.08 MB/s (8x) max.	max. 24x CAV (max. 3.6 MB/s)	max. 8X CAV (max. 10.8 MB/s)
Buffer Memory	1 MB			
Interface	SATA			
Applicable disc formats	4.7GB (Single Layer) 8.5GB (Dual Layer) DVD-R: 3.95GB (Ver. 1.0: read only) 4.7GB (Ver. 2.0 for Authoring: read only) 4.7GB (Ver. 2.1 for General: read & write) (DL)8.5GB (Ver. 3.0) DVD-RW:4.7GB (Ver. 1.2/ Rev 1.0, 2.0, 3.0) DVD-RAM:4.7GB/side (Ver. 2.2) DVD+R: 4.7GB (Ver. 1.3)(DL) 8.5GB (Ver. 1.1) DVD+RW: 4.7GB (Vol.1 Ver.1.3) CD-ROM Mode-1 data disc CD-ROM Mode-2 data disc CD-ROM XA, CD-I, Photo-CD Multi-Session, Video CD CD-Audio Disc Mixed mode CD-ROM disc (data and audio) CD-Extra CD-Text CD-R (Conforming to "Orange Book Part 2": read & write) CD-RW (Conforming to "Orange Book Part 3": read & write)			

Item	Specification
Loading mechanism	Drawer type manual load Electrical release Emergency Release (draw open hole)
Power Requirement	
Input Voltage	DC 5 V +/- 5%

Super-Multi Drive Module (continued)

Item	Specification					
Vendor & model name	PLDS DS8A4SH		Sony AD7585H			
Performance Specification	With CD Diskette	With DVD Diskette	With CD Diskette	With DVD Diskette		
Transfer rate (MB/sec)	Sustained: - CD-ROM inside 1.45 MB/s (min.) - CD-ROM outside 3.5 MB/s (min.)	Sustained: - DVD-ROM inside 3.7 MB/s (min.) - DVD-ROM outside 10 MB/s (min.)	Sustained: - CD-ROM inside 1.57 MB/s (typical) - CD-ROM outside 3.65 MB/s (typical)	Sustained: - DVD-ROM inside 4.57 MB/s (typical) - DVD-ROM outside 10.99 MB/s (typical)		
Buffer Memory	2 MB		2 MB			
Interface	SATA		SATA			
Applicable disc formats	DVD-ROM, DVD-Video, DVD-Audio, DVD-RW DVD+RW DVD-R single/multi border(s) DVD+R single/multi session(s) DVD-R9 single/multi border(s) DVD+R9 single/multi session(s) DVD-RAM CD-DA, CD-TEXT, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Form-2, CD-I Ready, Video-CD (MPEG-1), Photo-CD, Enhance CD, CD extra, UDF (fixed/variable Packet mode)		DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-Video, DVD-Audio, SACD (Hybrid), UDF DVD, DVD-R, DVD-R DL, DVD-R 3.95 GB, DVD-R Authoring, DVD-R Multi- Border, DVD-R Download (DVD-R CSS, Qflix), DVD-RW, DVD-RW DL, DVD+R, DVD+R, DVD Data & Video CD-DA, CD-ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Mode-2 Form-2, CD-i, CD-i Bridge, Video-CD (MPEG-1), Karaoke CD, Photo-CD, Enhanced CD, CD Plus, CD Extra, itrax CD, CD-Text, UDF CD, CD-R, and CD- RW, CD-DA, CD-ROM Mode-1, CD-ROM/ XA Mode-2 Form-1 and Mode-2 Form-2, CD-i, Video-CD, CD-Text			
Loading mechanism	Manual load/ Plunger system					
Power Requirement						
Input Voltage	DC 5 V +/- 5%					

Super-Multi Drive Module (continued)

Item	Specification	
Vendor & model name	Toshiba TSL633F	
Performance Specification	With CD Diskette	With DVD Diskette
Transfer rate (MB/sec)	Sustained: - CD-ROM/R Read (Mode1) Max 3.6 MB/sec - CD-RW Read (Mode1) Max 3.6 MB/sec	Sustained: - DVD-Single Read Max 10.8 MB/sec - DVD-ROM Dual Read Max 10.8 MB/sec - DVD±R Dual Read Max 8.1 MB/sec - DVD-RAM Read Max 6.75 MB/sec
Buffer Memory	2 MB	
Interface	SATA	
Applicable disc formats	DVD-ROM (Book 1.02), DVD-Dual DVD-Video (Book 1.1) DVD-R (Book 1.0, 3.9G) DVD-R (Book 2.0, 4.7G) - General & Authoring DVD+R (Version 1.0) DVD+RW DVD-RW (Non CPRM & CPRM) DVD±R Dual DVD-RAM CD-DA (Red Book) - Standard Audio CD & CD-TEXT CD-ROM (Yellow Book Mode1 & 2) - Standard Data CD-ROM XA (Mode2 Form1 & 2) - Photo CD, Multi-Session CD-I (Green Book, Mode2 Form1 & 2, Ready, Bridge) CD-Extra/ CD-Plus (Blue Book) - Audio & Text/Video Video-CD (White Book) - MPEG1 Video CD-R (Orange Book Part 1) CD-RW & HSRW (Orange Book Part 2 Volume1 & Volume2) Super Audio CD (SACD) Hybrid type US & US+ CD-RW	
Loading mechanism	Drawer (Solenoid Open) Tact SW (Open) Emergency Release (draw open hole)	
Power Requirement		
Input Voltage	DC 5 V +/- 5%	

Keyboard Controller

Item	Specification
Controller	WPC781
Total number of keypads	86 key for US/CA, 87 key for FR/SP/GM, 89 key for JP 19mm
Hotkeys	Standby, wireless/BT enable/disable, brightness up/down, LCD/CRT. See "Hot Keys" on page 15.

I/O Ports

Item	Specification
I/O support	<ul style="list-style-type: none"> • Multi-in-1 card reader (SD™, MMC, MS, MS PRO, xD) • Three USB 2.0 ports • External display (VGA) port • Headphone/speaker/line-out jack • Microphone-in jack • Ethernet (RJ-45) port • Modem (RJ-11) port • DC-in jack for AC adapter • Port replicator connector

Main Battery

Item	Specification				
	6 Cell				
Vendor	Simplo	Panasonic	Sanyo	Samsung	Sony
Part name	AS10D71	AS10D51	3UR18650-2-T0590	AS10D61AH A63222537	AS10D41
Battery Type	Li-ion				
Pack capacity	4400mAh				
Normal voltage	11.1V	10.8V	10.8V	10.8V	10.8V
Charge voltage	12.6V				
Fast charge current	3520 mA	3010 mA	3520 mA	3520 mA	3520 mA

RTC Battery

Item	Specification
Part name	Maxell ML1220
Pack capacity	14mA/hr.
Normal voltage	3V

LCD Inverter (Not available in this model)

Item	Specification
Vendor & model name	
Brightness conditions	
Input voltage (v)	
Input current (mA)	
Output voltage (V, RMS)	
Output current (mA, RMS)	
Output voltage frequency (KHz)	

External Display Supported Resolution

Resolution	24 bits	30 bits	36 bits	48 bits
640X480p/60Hz 4:3	Yes	NA	NA	NA
720X480p/60Hz 4:3	NA	NA	NA	NA
640X480p/60Hz 16:9	NA	NA	NA	NA
1280X720p/60Hz 16:9	Yes	NA	NA	NA
1920X1080p/60Hz 16:9	Yes	NA	NA	NA
1440X480p/60Hz 4:3	NA	NA	NA	NA
1440X480p/60Hz 16:9	NA	NA	NA	NA
1920X1080p/50Hz 16:9	Yes	NA	NA	NA
720X576p/50Hz 4:3	Yes	NA	NA	NA
720X576p/50Hz 16:9	NA	NA	NA	NA
1280X720p/50Hz 16:9	Yes	NA	NA	NA
1920X1080i/50Hz 16:9	Yes	NA	NA	NA
1440X576i/50Hz 4:3	NA	NA	NA	NA
1440X576i/50Hz 16:9	NA	NA	NA	NA
1920X1080p/50Hz 16:9	Yes	NA	NA	NA

LCD

Item	Specification					
Vendor/model name	AUO B140XW01 V8	Chimei BT140GW01	LG LP140WH1	Samsung LTN140AT01-G03		
Screen Diagonal (mm)	14" diagonal mm					
Display Area (mm)	309.4 x 173.95 mm					
Display resolution (pixels)	1366 x 768					
Pixel Pitch	0.2265 x 0.2265 mm					
Display Mode	Normally white					
Typical White Luminance (cd/m ²) (also called Brightness)	200 typ. 170 min.	220 typ. 200 min.	220	220 typ. 190 min.		
Contrast Ratio (typical)	500	600	500	500		
Response Time (Optical Rise Time/Fall Time) msec	8 typ. / 16 max.	8 typ. / 15 max.		8 typ. / 12 max.		
Weight	350 max.					
Physical Size (mm)	324 (H) x 192.5 (V) x 5.2 (D) mm					
Electrical Interface	1 channel LVDS					
Support Color	16.7 million colors					
Viewing Angle (up/down/right/left)	40 Degrees (L+R), 15 Degrees (H), 35 Degrees (L)	40 Degrees (L+R), 15 Degrees (H), 30 Degrees (L)	40 Degrees (L+R), 10 Degrees (H), 30 Degrees (L)	45 Degrees (L+R), 15 Degrees (H), 35 Degrees (L)		
Temperature Range (°C) Operating Storage (shipping)	0 Min. - 50 Max -20 Min. - 60 Max					

Camera

Item	Specification		
Vendor and model	Chicony CNF9157	Liteon 09P2SF119	Suyin F1315-S32B-OV01
Type	CMOS image sensor with SXGA		
Interface	USB 2.0		
Focusing range	31.4cm ~ infinity	32cm ~ infinity	70 mm
Dimensions (L x W x H mm)	65.0±0.3 X 8.0±0.1 X 3.69+0.11/-0.2 mm	65.0 x 8.0 x 3.53 ±0.2mm	65 x 8.0 x 3.74 mm
Sensor type	SXGA CMOS sensor	CMOS Image Sensor	
Pixel resolution	1280x1024, 1280x800, 640x480, 352x288, 320x240, 176x144, 160x120	1280x1024, 1024x768, 640x480, 350x288, 320x240, 176x144, 160x120	1280x1024, 1024x768, 800x600, 640x480, 352x288, 320x240, 176x144, 160x120
Pixel size	2 um x 2 um		
Image size	1.3 MP		

Card Reader

Item	Specification
Chipset	AU6437-GBL
Features	Secure Digital™ (SD) Card, MultiMediaCard (MMC), Memory Stick™ (MS), Memory Stick PRO™ (MS PRO), xD-Picture Card™ (xD)

System LED Indicator

Item	Specification
Drive Activity	Power Led: Blue Suspend: Amber
Primary Battery charging state	Amber: Battery Charging

AC Adapter

Item	Specification
Input rating	90 Vac to 264 Vac
Maximum input AC current	132 Vac to 264 Vac
Inrush current	264 Vac; (Cold Start) No damage
Efficiency	Meets EPA 2.0 level V requirements

Trusted Platform Module (TPM) (Not available with this model)

Item	Specification
Version	
Hardware controller	

System Power Management

Item	Initial	On	Standby	Suspend	Hibernate	Soft Off
Initial		1				
On(S0)			2	3	4	5
Standby(S1)		6				
Suspend(S3)		7				
Hibernate(S4)		8				
Soft Off(S5)		9				

Mechanical off is a condition where all power except the RTC battery has been removed from the system.

1. Initial to On state: When the AC adapter or Battery pack has been plugged into the system, the I WPC781 will be reset and initial all output pins then the system goes into Initial state and waiting for power on event. If the power button is pressed then the system will go into the ON state.
2. ON to Standby state: The system will go into the Standby state when ICH9M receives the POS command.
3. ON to Suspend state: The system will go into Suspend state when ICH9M receives the S2R command.
4. ON to Hibernate state: The system will go into Hibernate state when ICH9M receives the S2D command.
5. ON to Soft Off state: The system will go into Soft Off state when ICH9M receives the Soft off command.
6. Standby to ON state: The system will go into ON state when the system receives any wake up events, for example, keyboard, mouse.
7. Suspend to ON state: The system will go into ON state when the power button is pressed.
8. Hibernate to ON state: The system will go into ON state when the power button is pressed.
9. Soft Off to ON state: The system will go into ON state when the power button is pressed.

System Utilities

BIOS Setup Utility

The BIOS Setup Utility is a hardware configuration program built into your computer's BIOS (Basic Input/Output System).

Your computer is already properly configured and optimized, and you do not need to run this utility. However, if you encounter configuration problems, you may need to run Setup. Please also refer to Chapter 4 Troubleshooting when problem arises.

To activate the BIOS Utility, press **F2** during POST (when **Press <F2> to enter Setup** message is prompted on the bottom of screen).

Press **F2** to enter setup. The default parameter of F12 Boot Menu is set to "disabled". If you want to change boot device without entering BIOS Setup Utility, please set the parameter to "enabled".

Press **<F12>** during POST to enter multi-boot menu. In this menu, user can change boot device without entering BIOS SETUP Utility.

Navigating the BIOS Utility

There are five menu options: Information, Main, Security, Boot, and Exit.

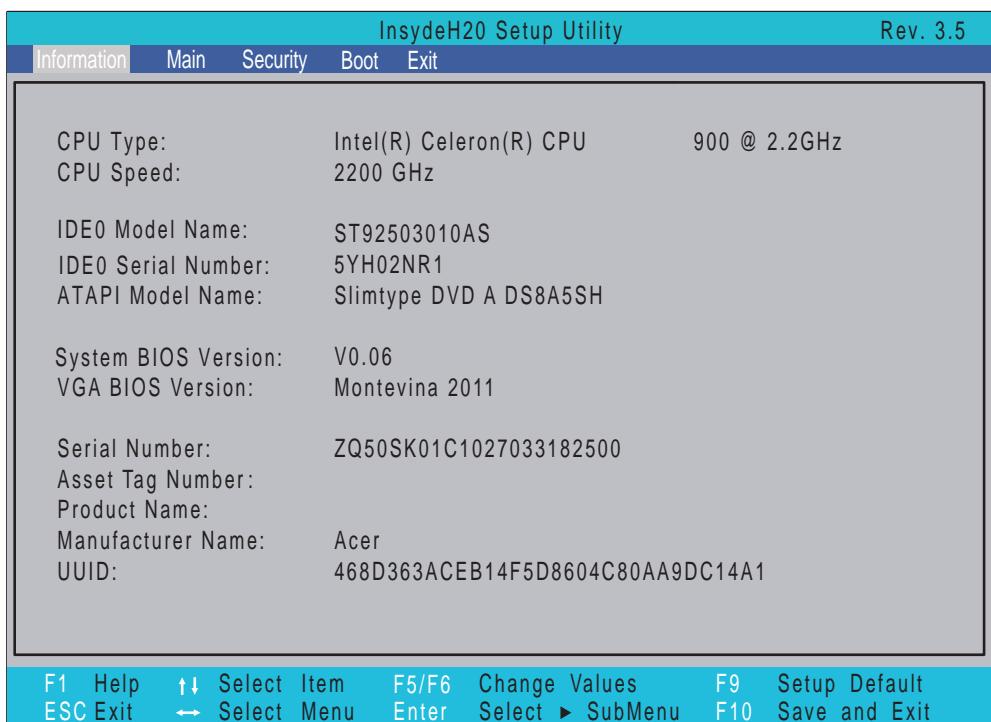
Follow these instructions:

- To choose a menu, use the left and right arrow keys.
- To choose an item, use the up and down arrow keys.
- To change the value of a parameter, press **F5** or **F6**.
- Press **Esc** while you are in any of the menu options to go to the Exit menu.
- In any menu, you can load default settings by pressing **F9**. You can also press **F10** to save any changes made and exit the BIOS Setup Utility.

NOTE: You can change the value of a parameter if it is enclosed in square brackets. Navigation keys for a particular menu are shown on the bottom of the screen. Help for parameters are found in the Item Specific Help part of the screen. Read this carefully when making changes to parameter values. **Please note that system information is subject to different models.**

Information

The Information screen displays a summary of your computer hardware information.

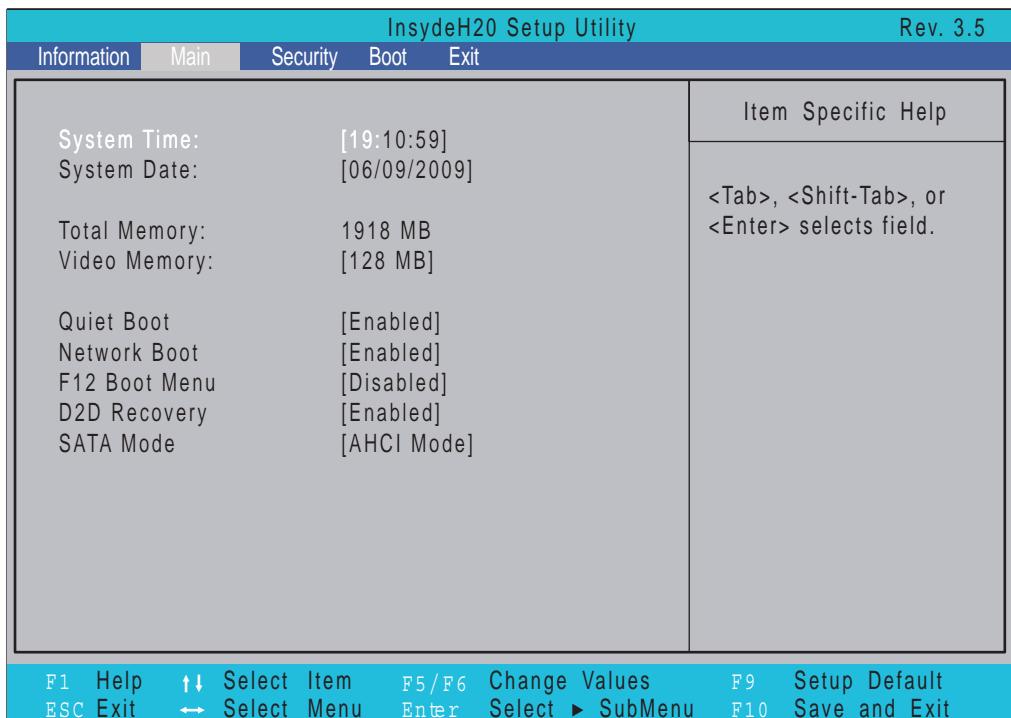


NOTE: The system information is subject to different models.

Parameter	Description
CPU Type	This field shows the CPU type and speed of the system.
CPU Speed	This field shows the speed of the CPU.
IDE0 Model Name	This field shows the model name of HDD installed in the system.
IDE0 Serial Number	This field displays the serial number of HDD installed in the system.
ATAPI Model Name	This field displays the model name of the installed ODD drive.
System BIOS Version	Displays system BIOS version.
VGA BIOS Version	This field displays the VGA firmware version of the system.
Serial Number	This field displays the serial number of this unit.
Asset Tag Number	This field displays the asset tag number of the system.
Product Name	This field shows product name of the system.
Manufacturer Name	This field displays the manufacturer of this system.
UUID	Universally Unique Identifier (UUID) is an identifier standard used in software construction, standardized by the Open Software Foundation (OSF) as part of the Distributed Computing Environment (DCE).

Main

The Main screen allows the user to set the system time and date as well as enable and disable boot option and recovery.



NOTE: The screen above is for your reference only. Actual values may differ.

The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

Parameter	Description	Format/Option
System Time	Sets the system time. The hours are displayed with 24-hour format.	Format: HH:MM:SS (hour:minute:second)
System Date	Sets the system date.	Format MM/DD/YYYY (month/day/year)
Total Memory	This field reports the memory size of the system. Memory size is fixed to 4096MB.	N/A
Video Memory	Shows the video memory size. VGA Memory size=32 MB	N/A
Quiet Boot	This will hide POST messages while booting.	Option: Enabled or Disabled
Network Boot	Enables, disables the system boot from LAN (remote server).	Option: Enabled or Disabled
F12 Boot Menu	Enables, disables Boot Menu during POST.	Option: Disabled or Enabled
D2D Recovery	Enables, disables D2D Recovery function. The function allows the user to create a hidden partition on hard disc drive to store operation system and restore the system to factory defaults.	Option: Enabled or Disabled
SATA Mode	Control the mode in which the SATA controller should operate.	Option: AHCI mode or IDE mode

Security

The Security screen contains parameters that help safeguard and protect your computer from unauthorized use.

InsydeH20 Setup Utility		Rev. 3.5		
Information	Main	Security	Boot	Exit
Supervisor Password Is:		Clear	Item Specific Help	
User Password Is:		Clear	Supervisor Password controls access to the setup utility.	
HDD Password Is:		Clear		
Set Supervisor Password		[Enter]		
Set User Password		[Enter]		
Set Hdd Password		[Enter]		
Power on password		[Disabled]		
F1 Help ↑↓ Select Item F5/F6 Change Values F9 Setup Default ESC Exit ←→ Select Menu Enter Select ► SubMenu F10 Save and Exit				

The table below describes the parameters in this screen. Settings in **boldface** are the default and suggested parameter settings.

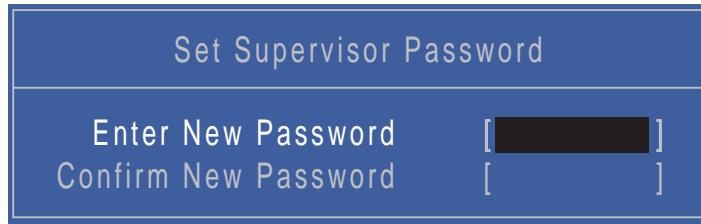
Parameter	Description	Option
Supervisor Password Is	Shows the setting of the Supervisor password	Clear or Set
User Password Is	Shows the setting of the user password.	Clear or Set
IDE0 HDD Password Is	Shows the setting of the HDD password	Clear or Set
Set Supervisor Password	Press Enter to set the supervisor password. When set, this password protects the BIOS Setup Utility from unauthorized access. The user can not either enter the Setup menu nor change the value of parameters.	
Set User Password	Press Enter to set the user password. When user password is set, this password protects the BIOS Setup Utility from unauthorized access. The user can enter Setup menu only and does not have right to change the value of parameters.	
Set IDE0 Hdd Password	Press Enter to set the HDD password. When set this protects the HDD from unauthorized access.	
Power on password	Defines whether a password is required or not while the events defined in this group happened. The sub-options all require the Supervisor password for changes and should be grayed out if the user password was used to enter setup.	Disabled or Enabled

NOTE: When you are prompted to enter a password, you have three tries before the system halts. Don't forget the password. If you forget the password, you may have to reset the computer.

Setting a Password

Follow these steps as you set the user or the supervisor password:

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press the **Enter** key. The Set Supervisor Password box appears:



2. Type a password in the "Enter New Password" field. The password length can not exceed 8 alphanumeric characters (A-Z, a-z, 0-9, not case sensitive). Retype the password in the "Confirm New Password" field.

IMPORTANT: Be very careful when typing your password because the characters do not appear on the screen.

3. Press **Enter**. After setting the password, the computer sets the User Password parameter to "Set".
4. If desired, you can opt to enable the Password on boot parameter.
5. When you are done, press F10 to save the changes and exit the BIOS Setup Utility.

Removing a Password

Follow these steps:

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press the **Enter** key. The Set Password box appears:



2. Type the current password in the Enter Current Password field and press **Enter**.
3. Press **Enter** twice **without** typing anything in the Enter New Password and Confirm New Password fields. The computer then sets the Supervisor Password parameter to "Clear".

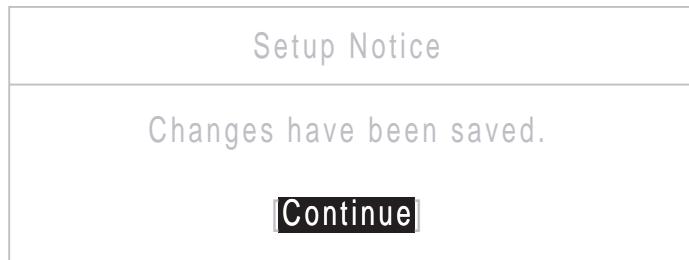
Changing a Password

1. Use the ↑ and ↓ keys to highlight the Set Supervisor Password parameter and press the **Enter** key. The Set Supervisor Password box appears.



2. Type the current password in the Enter Current Password field and press **Enter**.
3. Type a password in the Enter New Password field. Retype the password in the Confirm New Password field.
4. Press **Enter**. After setting the password, the computer sets the User Password parameter to "Set".
5. If desired, you can enable the Password on boot parameter.
6. When you are done, press **F10** to save the changes and exit the BIOS Setup Utility.

If the verification is OK, the screen will display as following.



The password setting is complete after the user presses **Enter**.

If the current password entered does not match the actual current password, the screen will show you the Setup Warning.

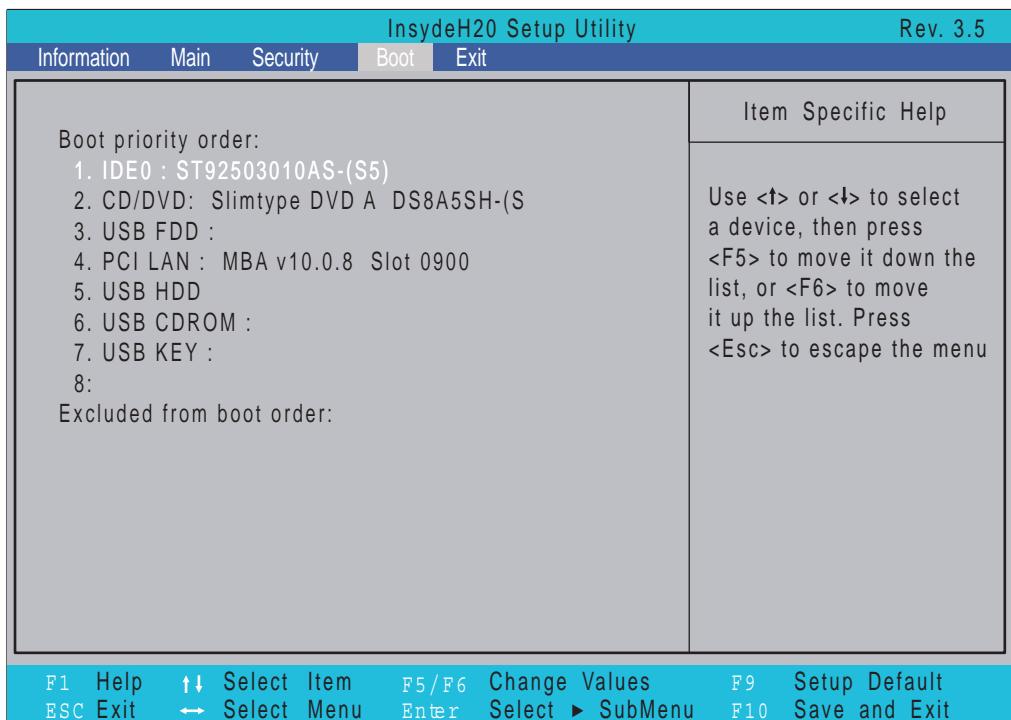


If the new password and confirm new password strings do not match, the screen displays the following message.



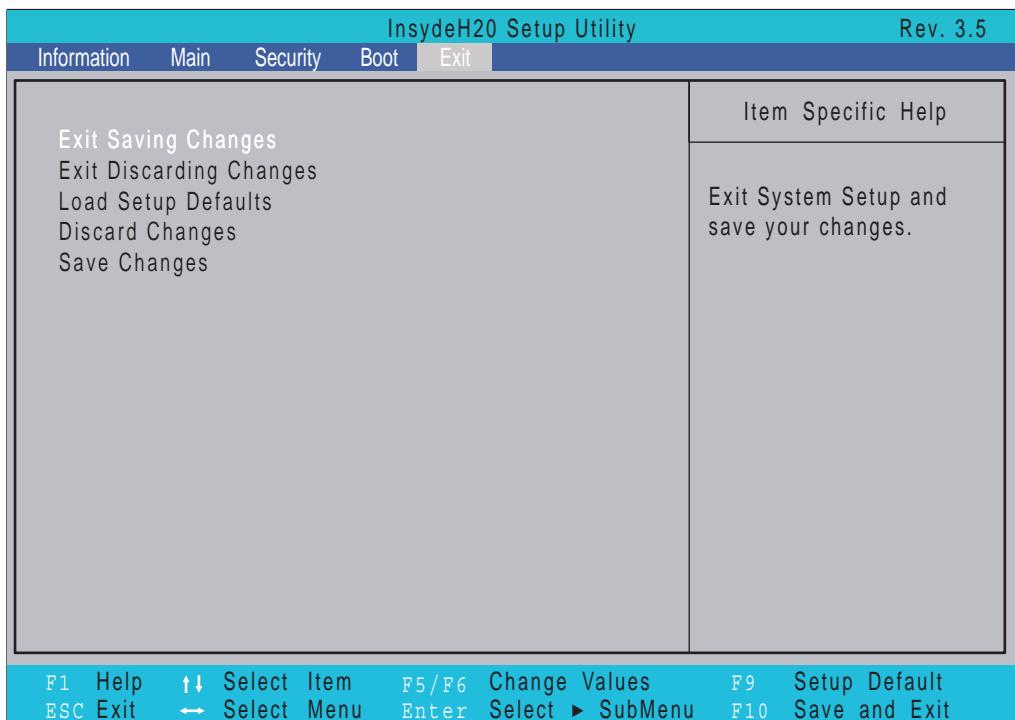
Boot

This menu allows the user to decide the order of boot devices to load the operating system. Bootable devices includes the USB diskette drives, the onboard hard disk drive and the DVD drive in the module bay.



Exit

The Exit screen allows you to save or discard any changes you made and quit the BIOS Utility.



The table below describes the parameters in this screen.

Parameter	Description
Exit Saving Changes	Exit System Setup and save your changes to CMOS.
Exit Discarding Changes	Exit utility without saving setup data to CMOS.
Load Setup Default	Load default values for all SETUP item.
Discard Changes	Load previous values from CMOS for all SETUP items.
Save Changes	Save Setup Data to CMOS.

BIOS Flash Utility

The BIOS flash memory update is required for the following conditions:

- New versions of system programs
- New features or options
- Restore a BIOS when it becomes corrupted.

DOS Flash Utility

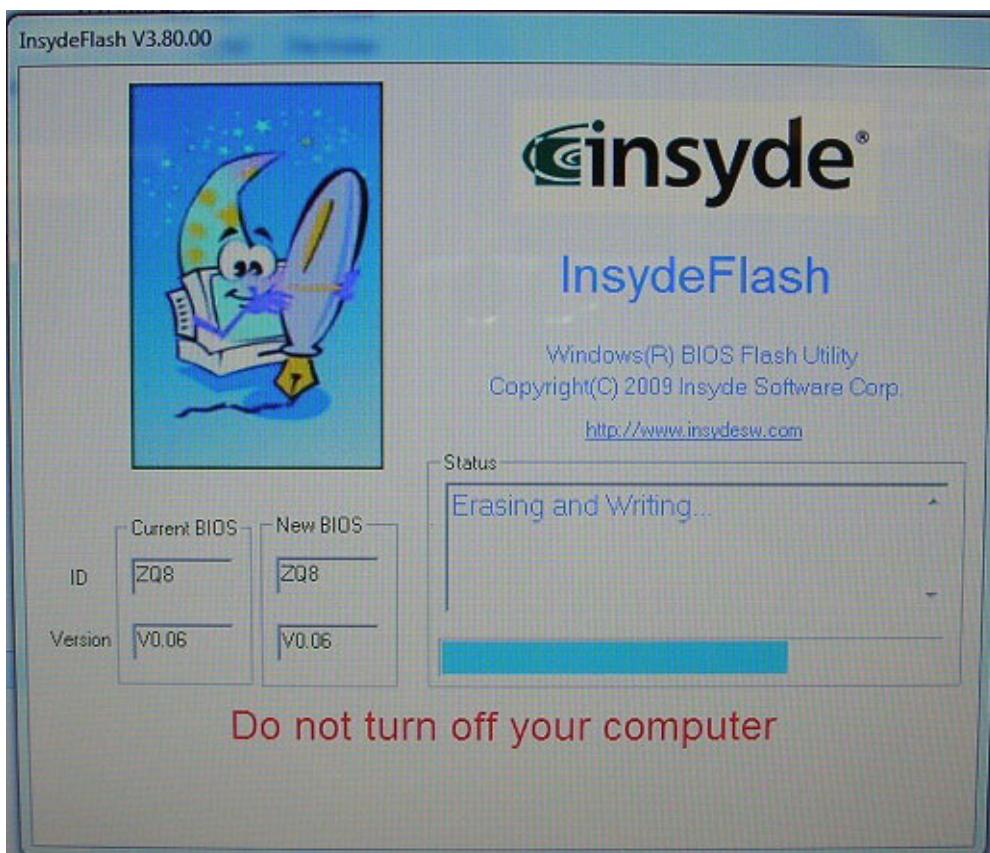
Perform the following steps to use the DOS Flash Utility:

1. Copy ZQ5v0.08.exe to a USB stick.
2. **Boot to DOS mode.**
3. **Execute ZQ5v0.08.exe in DOS mode to begin the flash process. The system will restart automatically when finished.**

WinFlash Utility

Perform the following steps to use the WinFlash Utility:

1. Double click the WinFlash executable (ZQ5_100W.exe)
2. Click **OK** to begin the update. A progress screen will display the current state of BIOS flash process.



Remove HDD/BIOS Password Utilities

This section provides you with details about removing HDD/BIOS password:

Remove HDD Password:

If you key in the wrong HDD password three times, an error is generated.



To reset the HDD password, perform the following steps:

1. On another computer, run HDD_PW.exe.
2. Enter "hdd_pw 15494 0"
3. Choose one (1) of the generated passwords.

```
C:\WINDOWS\system32\cmd.exe
F:>cd password
F:>password>dir/w
Volume in drive F has no label.
Volume Serial Number is D4F6-0236

Directory of F:\password

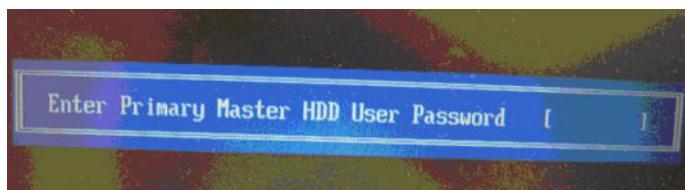
[.]      [..]      BIOS_PW.EXE    HDD_PW.EXE
1.        2 File(s)      35,354 bytes
1.        2 Dir(s)     487,895,040 bytes free

F:>password>hdd_pw 15494 0
unlock6.exe v1.1 2 May 2003

Choice what kind of the password to be generated:
0.) Exit...
1.) Scan Code
2.) Upper case ASCII Code
3.) Lower case ASCII Code
Enter your choice:2
0KJFN42 3.
UWEIQ96
F:>password>
```

A screenshot of a Windows Command Prompt window titled "C:\WINDOWS\system32\cmd.exe". The command "cd password" is entered, followed by "password>dir/w" which shows a directory listing for "F:\password" with files "BIOS_PW.EXE" and "HDD_PW.EXE". The command "F:>password>hdd_pw 15494 0" is then entered. A menu appears asking "Choice what kind of the password to be generated:" with options 0, 1, 2, and 3. The user enters "2". The command "F:>password>" is shown at the bottom.

4. Reboot the locked computer and key in one of the passwords from number 3 above.



Removing BIOS Passwords:

If you key in the wrong Supervisor Password three times, System Disabled displays on the screen as below.

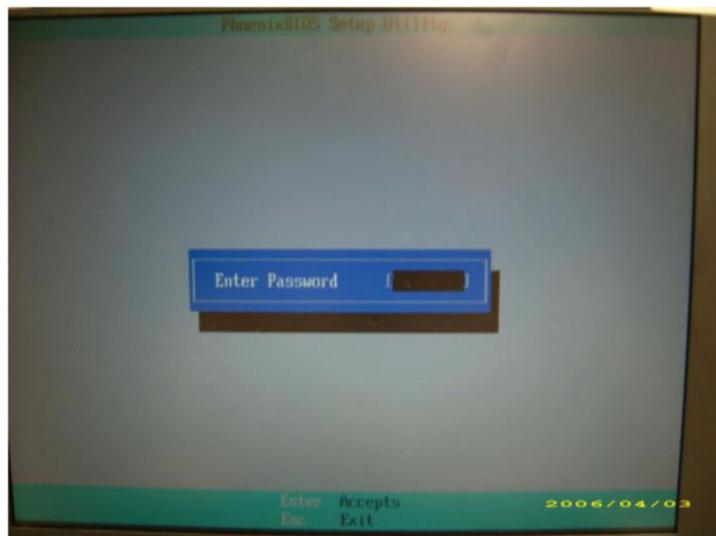


To reset the BIOS password, run BIOS_PW.EXE on a second machine as follows:

1. At a command prompt, type **bios_pw 14452 0**.
2. Select one string from the list.



3. Reboot the system and type the selected string (in this example qjjg9vy or 07yqmjd etc.) for the BIOS user password.



Cleaning BIOS Passwords

To clear the password, perform the following steps:

1. From a DOS prompt, Execute **clnpwd.exe**

```
d:\Clnpwd>clnpwd
ACER Clean Password Utility V1.00
Press 1 or 2 to clean any password shown as below
    1.User Password
    2.Supervisor Password

Clean User Password Successfully!
```

2. Press 1 or 2 to clean the desired password shown on the screen.

The onscreen message determines whether the function is successful or not.

Miscellaneous Utilities

Using Boot Sequence Selector

Boot Sequence Selector allows the boot order to be changes without accessing the BIOS. To use Boot Sequence Selector, perform the following steps:

1. Enter into DOS.
2. Execute BS.exe to display the usage screen.

```
d:\BOOTSEQ>bs
*** Boot Sequence Selecter Version 0.03 ***
Create by Rockwell Chuang 10/01/2005.

Usage:
      BS [ 1 | 2 | 3 | 4 ]

BS 1 : [ Floppy ] => [ HardDisk ] => [ CD-ROM ] => [ LAN ]
BS 2 : [ HardDisk ] => [ CD-ROM ] => [ LAN ] => [ Floppy ]
BS 3 : [ CD-ROM ] => [ HardDisk ] => [ LAN ] => [ Floppy ]
BS 4 : [ LAN ] => [ Floppy ] => [ HardDisk ] => [ CD-ROM ]

d:\BOOTSEQ>
```

3. Select the desired boot sequence by entering the corresponding sequence, for example, enter BS2 to change the boot sequence to HDD|CD ROM|LAN|Floppy.

Using DMITools

The DMI (Desktop Management Interface) Tool copies BIOS information to eeprom to be used in the DMI pool for hardware management.

When the BIOS displays **Verifying DMI pool data** it is checking the table correlates with the hardware before sending to the operating system (Windows, etc.).

To update the DMI Pool, perform the following steps:

1. Enter into DOS.
2. Execute **dmitools.exe**. The following messages show dmitools usage:

```
*** Compal DMI String R/W Utility Ver1.40 for 2006/03/14 **

Usage:

DMITOOLS [ /R | /WP | /WS | /WU ] [ STRING ]

[ /R ] : Read DMI Information from Memory
[ /WM ] : Write Manufacturer Name to EEPROM. (Max.= 16 characters)
[ /WP ] : Write Product Name to EEPROM. (Max.= 16 characters)
[ /WS ] : Write Serial Number to EEPROM. (Max.= 22 characters)
[ /WU ] : Write UUID to EEPROM. (Ignore String )
[ /WA ] : Write Asset Tag to EEPROM. (Max.= 32 characters)
```

IMPORTANT:The following write examples (2 to 5) require a system reboot to take effect

Example 1: Read DMI Information from Memory

Input:

```
dmitools /r
```

Output:

```
Manufacturer (Type1, Offset04h): Acer  
Product Name (Type1, Offset05h): NS41 xxxx  
Serial Number (Type1, Offset07h): 01234567890123456789  
UUID String (Type1, Offset08h): xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx  
Asset Tag (Type3, Offset04h): Acer Asstag
```

Example 2: Write Product Name to EEPROM

Input:

```
dmitools /wp Acer
```

Example 3: Write Serial Number to EEPROM

Input:

```
dmitools /ws 01234567890123456789
```

Example 4: Write UUID to EEPROM

Input:

```
dmitools /wu
```

Example 5: Write Asset Tag to EEPROM

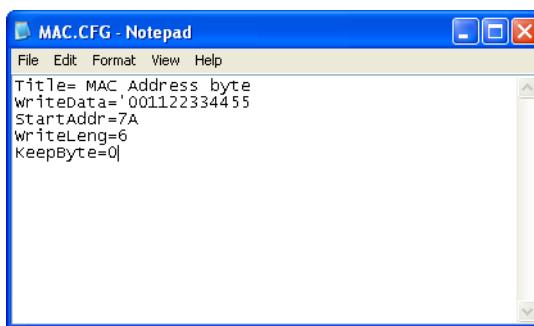
Input:

```
dmitools /wa Acer Asstag
```

Using the LAN MAC Utility

Perform the following steps to write MAC information to eeprom:

1. Use a text editor, for example Notepad, to edit the MAC.CFG file as shown:



- WriteData= '001122334455' <----- MAC value
- StartAddr=7A <----- MAC address
- WriteLeng=6 <----- MAC value length
- KeepByte=0 <----- can be any value

2. Boot into DOS.
3. Execute **MAC.BAT** to write MAC information to eeprom.

Machine Disassembly and Replacement

IMPORTANT:The outside housing and color may vary from the mass produced model.

This chapter contains step-by-step procedures on how to disassemble the notebook computer for maintenance and troubleshooting.

Disassembly Requirements

To disassemble the computer, you need the following tools:

- Wrist grounding strap and conductive mat for preventing electrostatic discharge
- Flat screwdriver
- Philips screwdriver
- Plastic flat screwdriver
- Plastic tweezers

NOTE: The screws for the different components vary in size. During the disassembly process, group the screws with the corresponding components to avoid mismatch when putting back the components.

Pre-disassembly Instructions

Before proceeding with the disassembly procedure, make sure that you do the following:

1. Turn off the power to the system and all peripherals.
2. Unplug the AC adapter and all power and signal cables from the system.



3. Place the system on a flat, stable surface.

Disassembly Process

The disassembly process is divided into the following stages:

- External module disassembly
- Main unit disassembly
- LCD module disassembly

The flowcharts provided in the succeeding disassembly sections illustrate the entire disassembly sequence. Observe the order of the sequence to avoid damage to any of the hardware components. For example, if you want to remove the mainboard, you must first remove the keyboard, then disassemble the inside assembly frame in that order.

Main Screw List

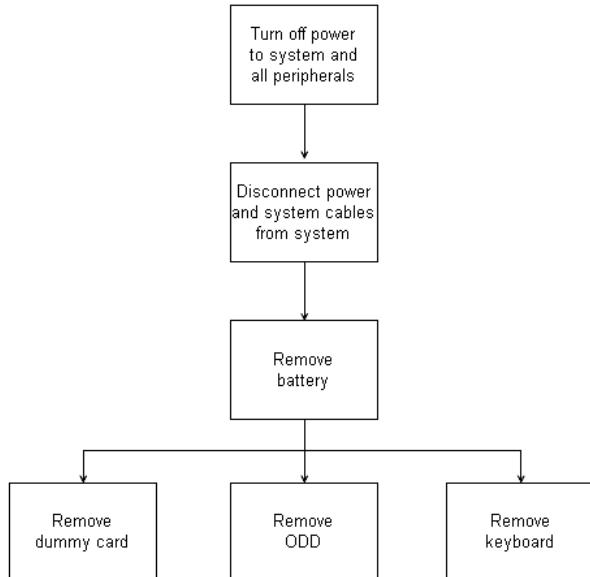
Screw	Quantity	Part Number
M2.0*3.0-I	15	86.ARE07.002
M2.5*4.0-I	9	86.R6Z07.001
M2.5*5.0-I	2	86.T23V7.010
M2.5*6.5-I	22	86.ARE07.001
M3.0X3.5-NIH	4	86.N1407.007
M2-0.4*2-I	1	86.W4107.002

External Modules Disassembly Process

IMPORTANT:The outside housing and color may vary from the mass produced model.

External Modules Disassembly Flowchart

The flowchart below gives you a graphic representation on the entire disassembly sequence and instructs you on the components that need to be removed during servicing. For example, if you want to remove the mainboard, you must first remove the keyboard, then disassemble the inside assembly frame in that order.

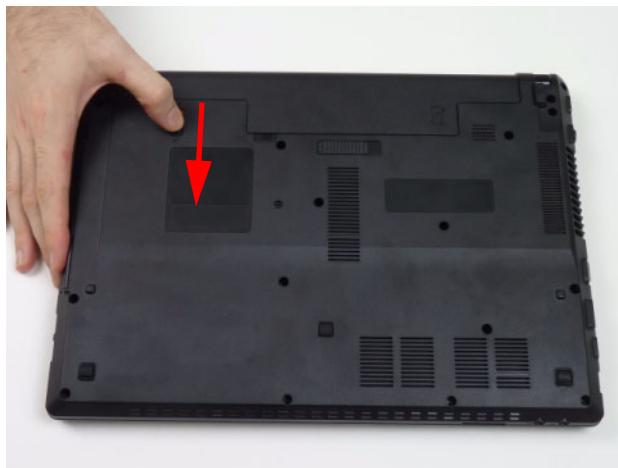


Screw List

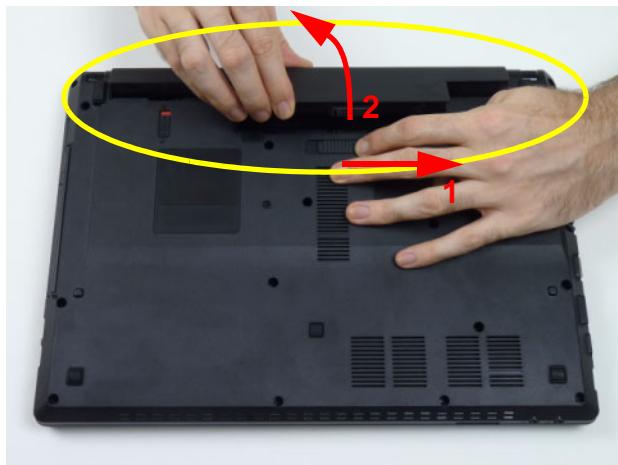
Step	Screw	Quantity	Part No.
ODD Module Disassembly	M2.5*6.5-l	1	86.ARE07.001
ODD Bracket Disassembly	M2.0*3.0-l	2	86.ARE07.002

Removing the Battery Pack

1. Turn the computer over. Slide the battery lock in the direction shown.



2. Slide and hold the battery release latch to the release position (1), then lift out the battery pack from the main unit (2).



NOTE: Please detach the battery and follow local regulations for disposal.

Removing the SD Dummy Card

1. See "Removing the Battery Pack" on page 49.
2. Push the SD dummy card all the way in to eject it.

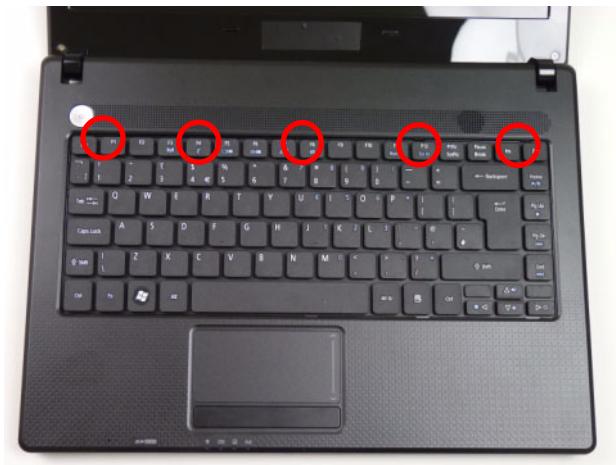


3. Pull it out from the slot.



Removing the Keyboard

1. See "Removing the Battery Pack" on page 49.
2. Turn the computer over and fully open the lid. There are five (5) securing clips that must be released in order to remove the keyboard.



3. Release each clip, working from one side to the other.



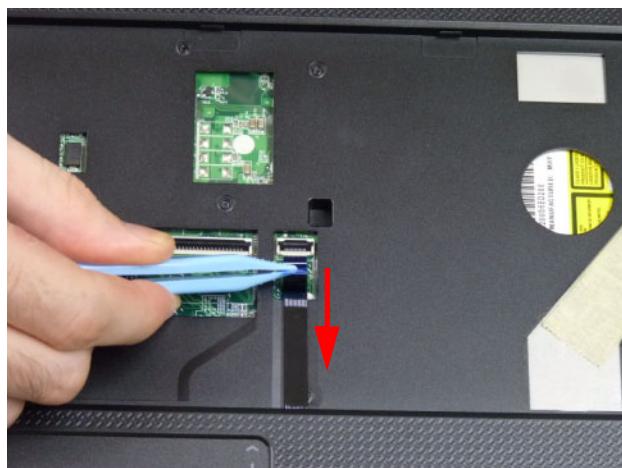
4. Using both hands, gently pry up the keyboard as shown and turn it over onto the palm rest.



5. Unlock the keyboard FPC and disconnect the cable as shown. Lift the keyboard clear of the chassis.

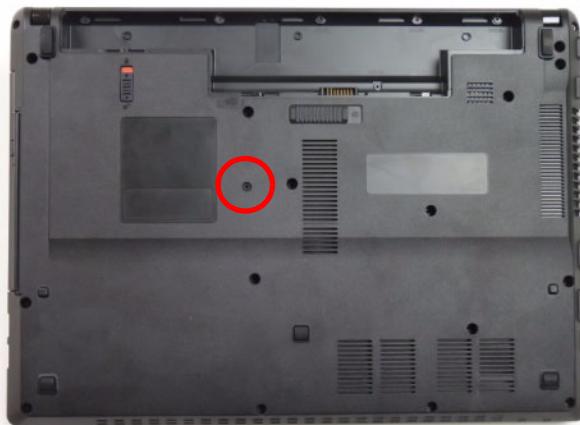


6. Unlock and disconnect the Touchpad FPC from the mainboard:



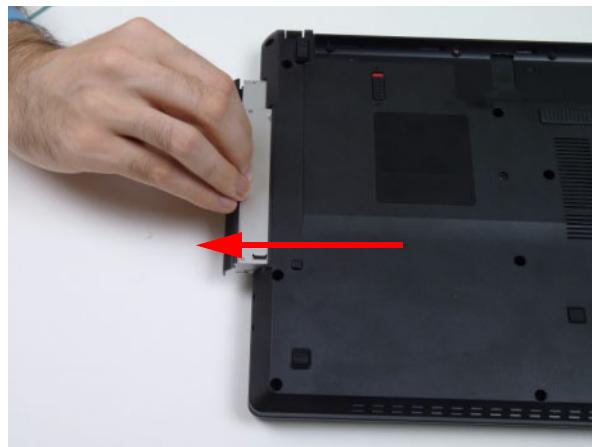
Removing the ODD Module

1. See "Removing the Battery Pack" on page 49.
2. Remove the one (1) screw securing the ODD module in place.

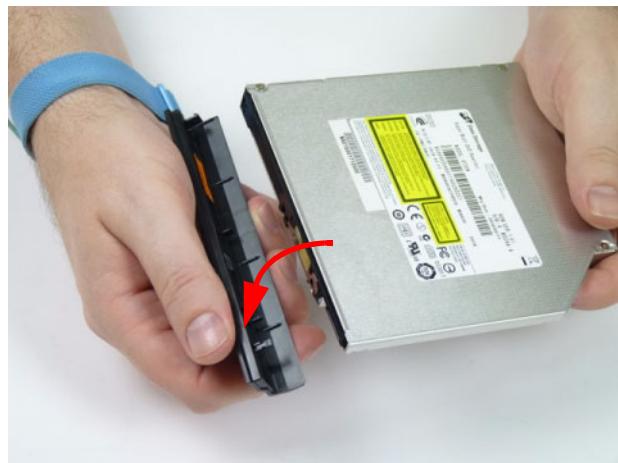


Step	Size	Quantity	Screw Type
ODD Bracket Disassembly	M2.5*6.5-l	1	

3. Grasp the ODD by the bezel and slide it out of the chassis.



4. Remove the ODD bezel by rotating the top edge downward.



5. Remove the two screws securing the ODD bracket.



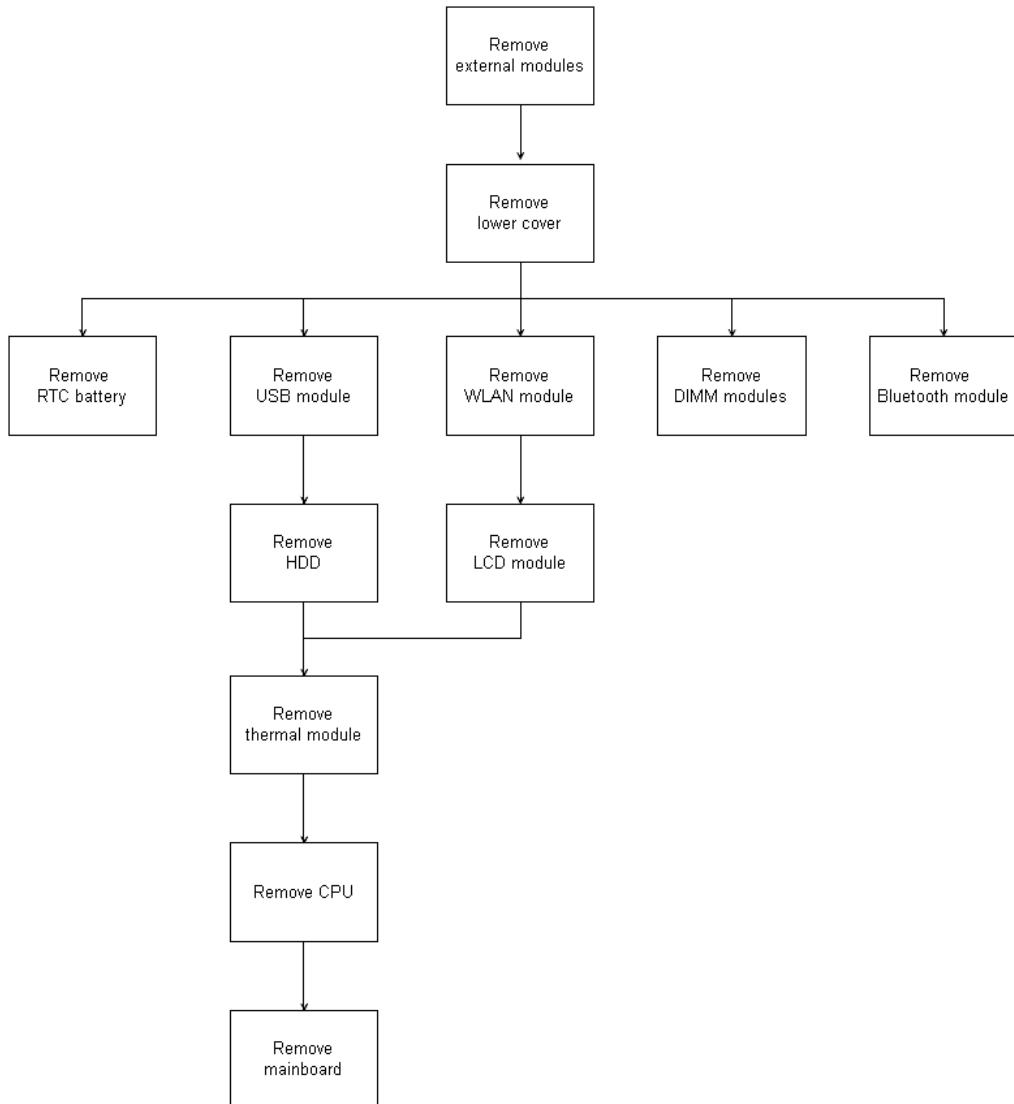
Step	Size	Quantity	Screw Type
ODD Bracket Disassembly	M2.0*3.0-I	2	

6. Remove the bracket from the ODD.



Main Unit Disassembly Process

Main Unit Disassembly Flowchart

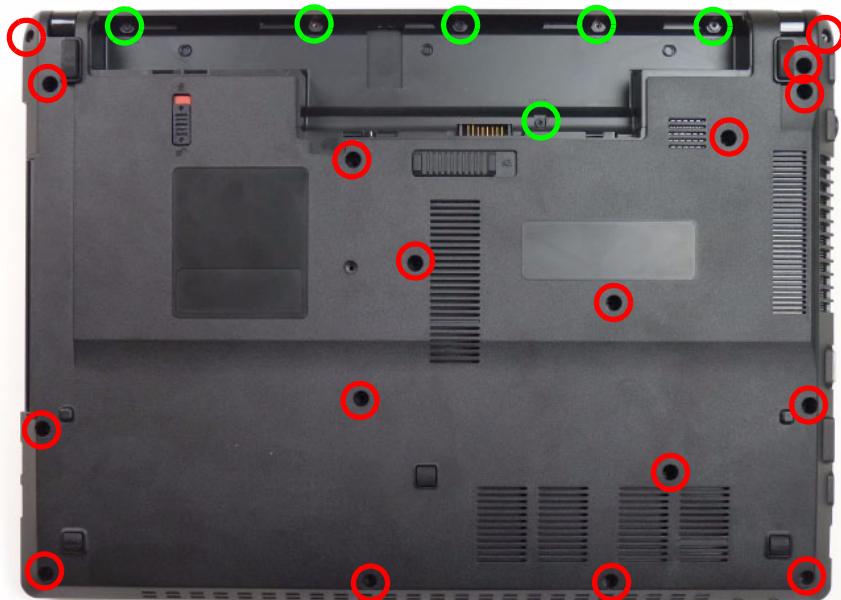


Screw List

Step	Screw	Quantity	Part No.
LCD Module	M2.5*6.5-I	4	86.ARE07.001
Lower Cover Disassembly	M2.5*6.5-I	17	86.ARE07.001
	M2.0*3.0-I	6	86.ARE07.002
USB Board Disassembly	M2.5*4.0-I	1	86.R6Z07.001
HDD Module Disassembly	M2.0*4.0-I	1	86.W4107.002
HDD Bracket	M3.0X3.5	4	86.N1407.007
WLAN Module Disassembly	M2.0*3.0-I	1	86.ARE07.002
Mainboard Disassembly	M2.5*4.0-I	1	86.R6Z07.001
Thermal Module Disassembly	M2.5*4.0-I	1	86.R6Z07.001

Removing the Lower Cover

1. See “External Modules Disassembly Process” on page 48.
2. Remove the twenty three (23) securing screws from the lower cover.



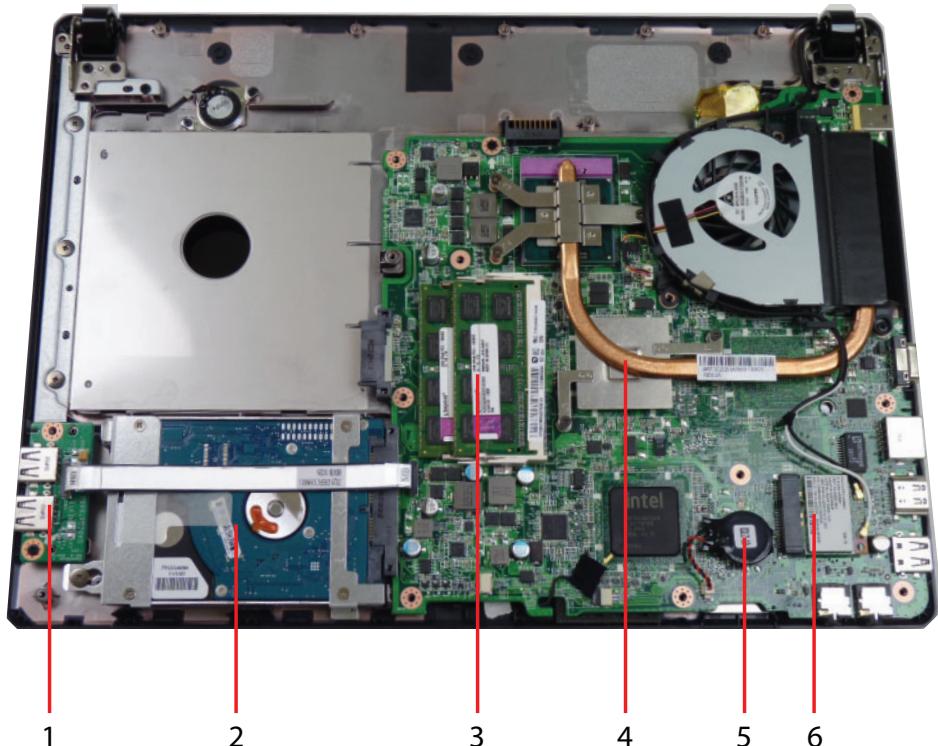
Step	Size	Quantity	Screw Type
Lower Cover (red callout)	M2.5*6.5-l	17	
Battery Bay (green callout)	M2.0*3.0-l	6	

3. Grasp the ODD bay and the other hand on the other edge of the lower cover. Lift the lower cover from the device.



Component Overview

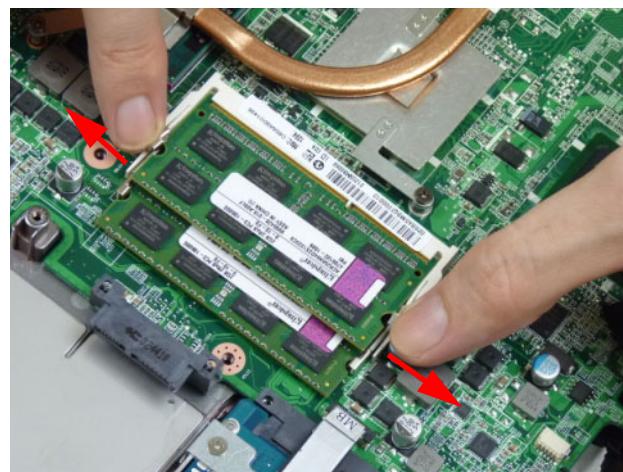
Main components are assembled on the mainboard as illustrated in the following graphic.



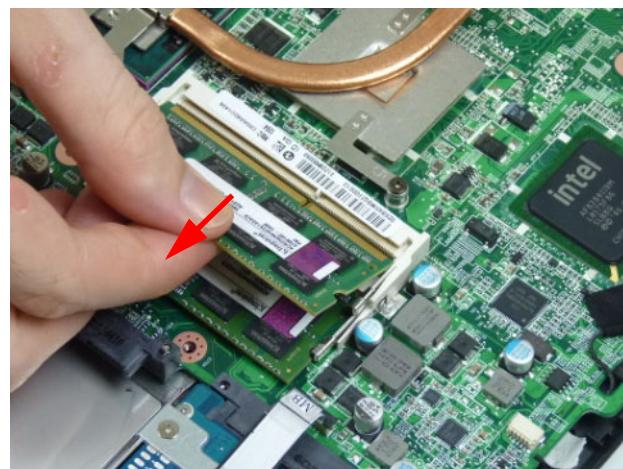
Item	Description	Item	Description
1	USB board	2	HDD
3	DIMM modules	4	Heatsink
5	RTC battery	6	WLAN module

Removing the DIMM Modules

1. See "Removing the Lower Cover" on page 56.
2. Push out the release latches on both sides of the DIMM socket to release the DIMM module.



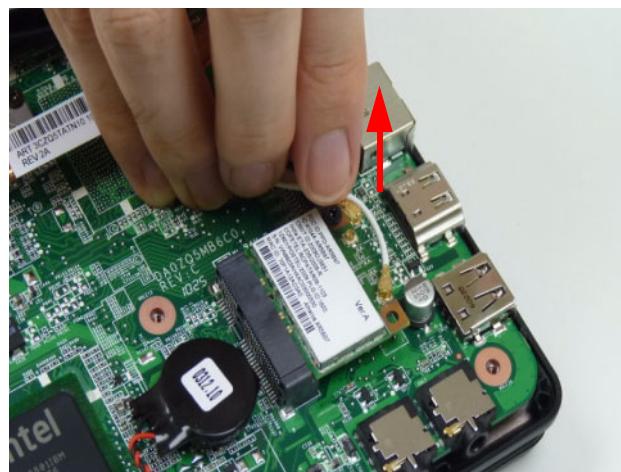
3. Remove the DIMM module.



4. Repeat steps for the second DIMM module if present.

Removing the WLAN Module

1. See "Removing the Lower Cover" on page 56.
2. Disconnect the two (2) cables from the WLAN board.



3. Remove the one (1) screw.



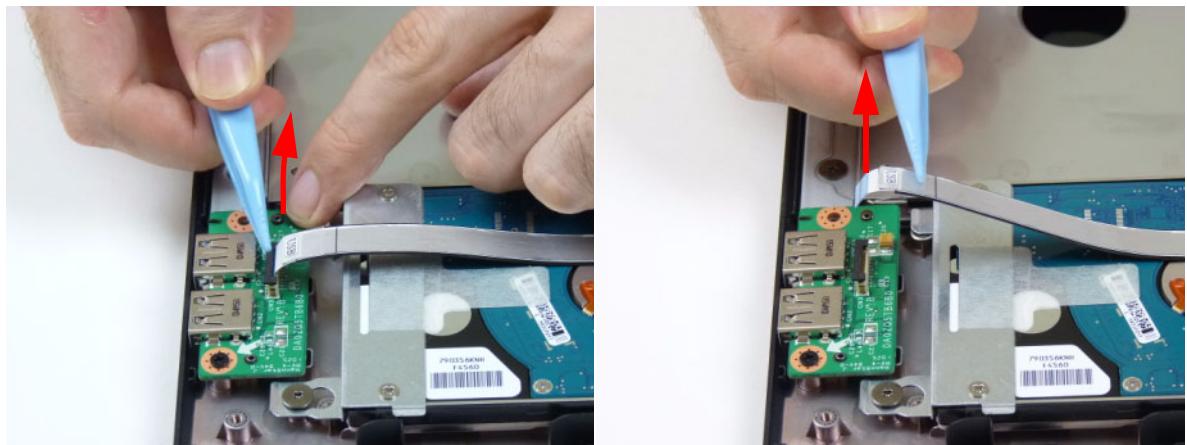
Step	Size	Quantity	Screw Type
WLAN Board Disassembly	M2.0*3.0-I	1	

4. Detach and remove the WLAN board from the WLAN socket.



Removing the USB Board

1. See "Removing the Lower Cover" on page 56.
2. Unlock and disconnect the USB FFC from the USB board. Repeat for the mainboard connector.

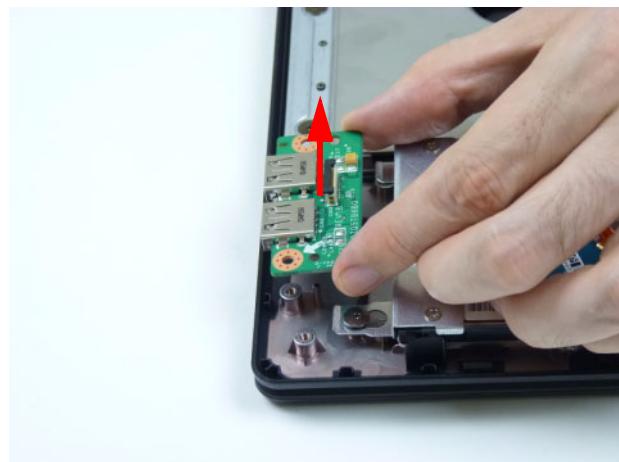


3. Remove the one (1) screw from the USB board.



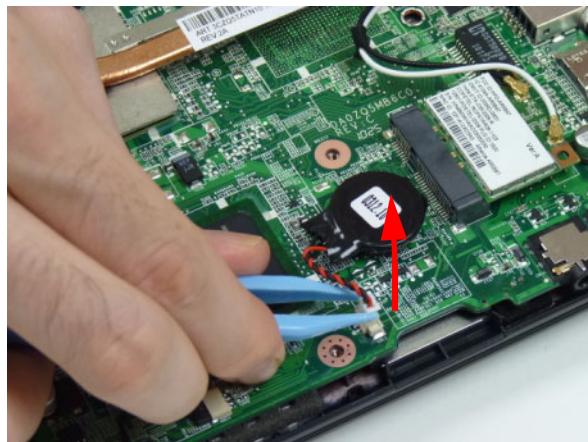
Step	Size	Quantity	Screw Type
USB Board Disassembly	M2.5*4.0-l	1	

4. Lift the USB board upward and away from the chassis.

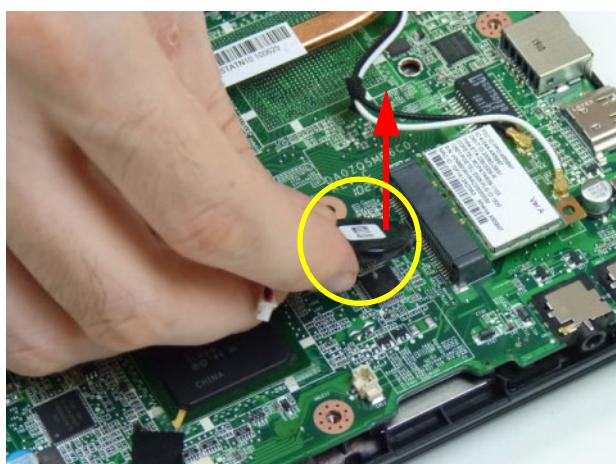


Removing the RTC Battery

1. See “Removing the Lower Cover” on page 56.
2. Disconnect the RTC battery cable from the mainboard.



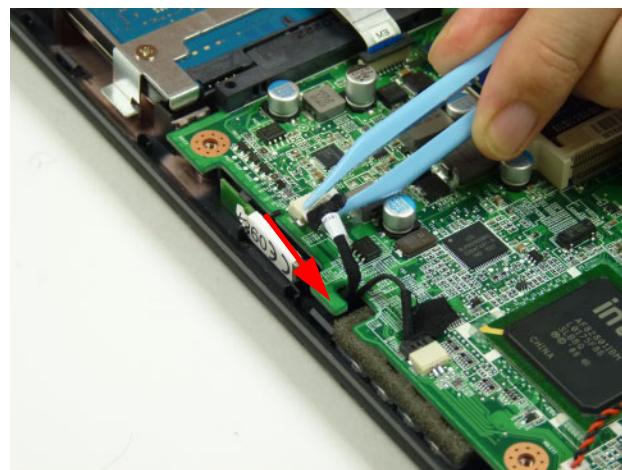
3. Lift the RTC battery away from the mainboard.



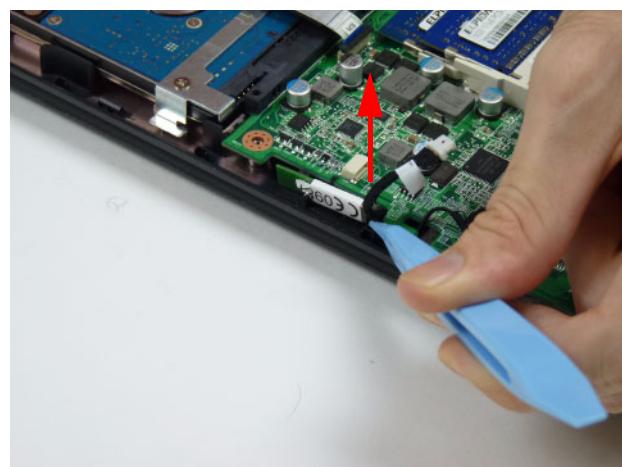
NOTE: The RTC battery has been highlighted with a yellow callout in the previous image. Please detach the RTC battery and follow local regulations for disposal.

Removing the Bluetooth Module

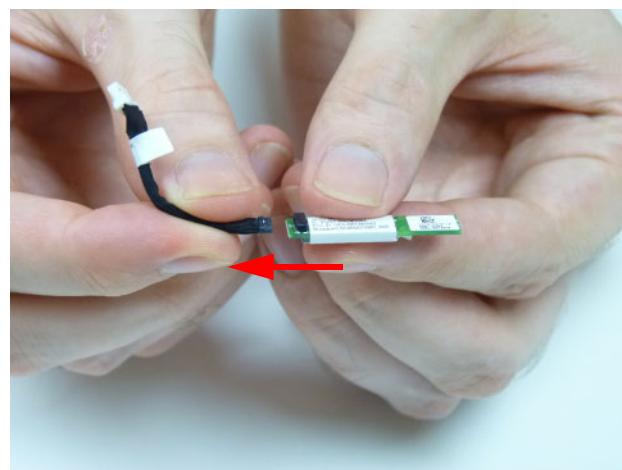
1. See “Removing the Lower Cover” on page 56.
2. Disconnect the Bluetooth cable from the mainboard.



3. Gently pry the Bluetooth module upwards and away from the mainboard.

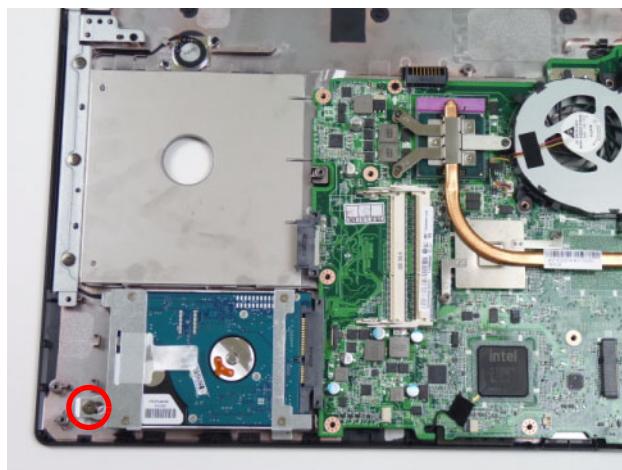


4. Disconnect the Bluetooth cable from the Bluetooth module.



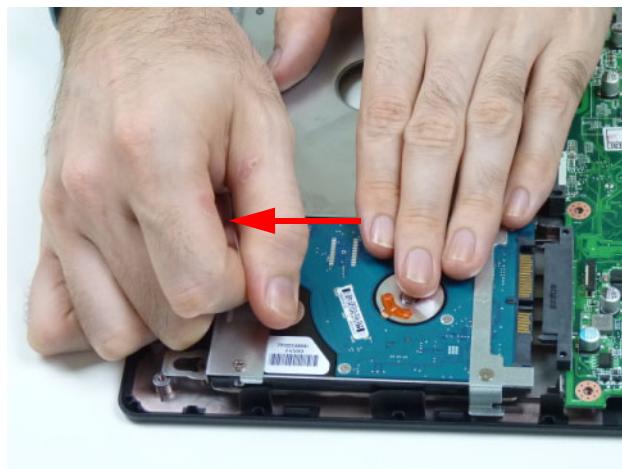
Removing the HDD Module

1. See “Removing the USB Board” on page 60.
2. Remove the one (1) screw securing the HDD module to the mainboard.

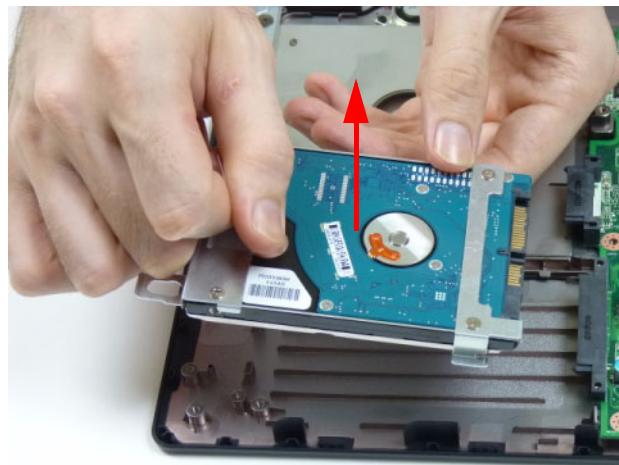


Step	Size	Quantity	Screw Type
HDD Module	M2-0.4*2-L	2	

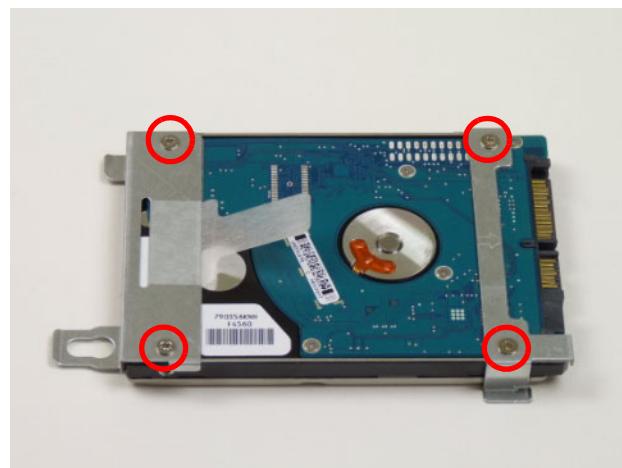
3. Using the pull-tab, slide the HDD module in the direction of the arrow to disconnect the interface.



4. Remove HDD from the bay.

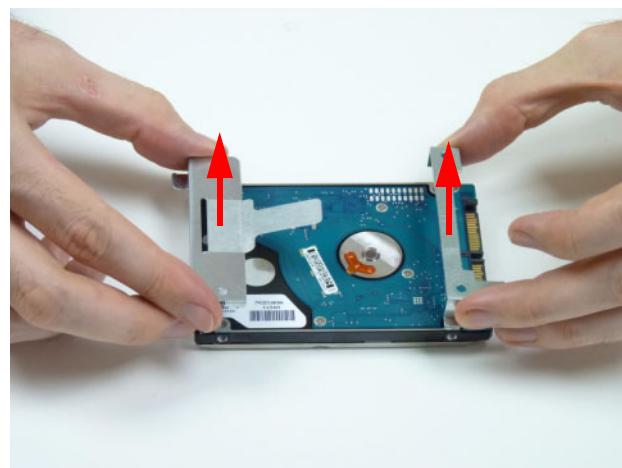


5. Remove the four (4) screws from the carrier.



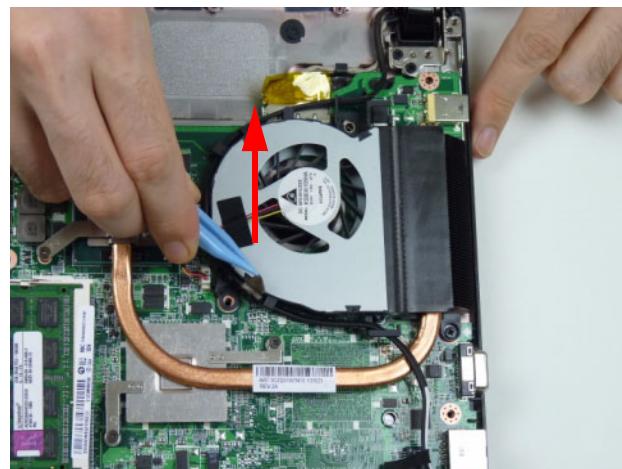
Step	Size	Quantity	Screw Type
HDD Carrier Disassembly	M3.0*3.5-NIH	4	

6. Remove the carrier from the HDD.

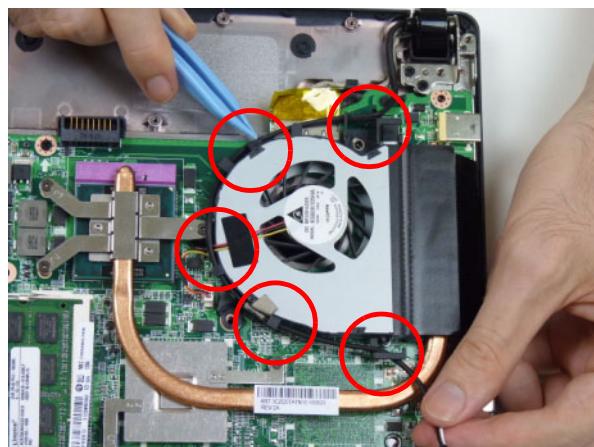


Removing the LCD Module

1. See “Removing the WLAN Module” on page 59.
2. Remove the adhesive ground wire from the fan housing.



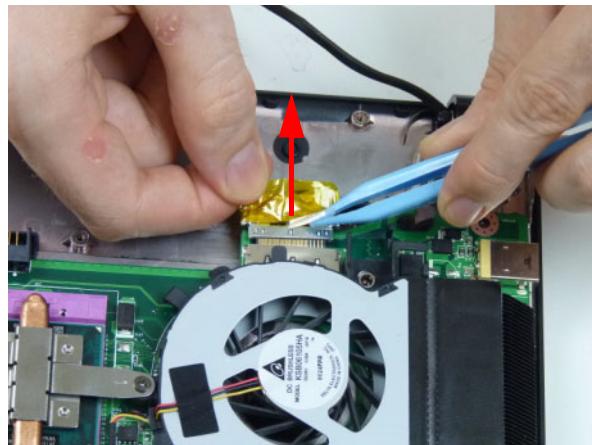
3. Remove the WLAN antennas from the cable guides.



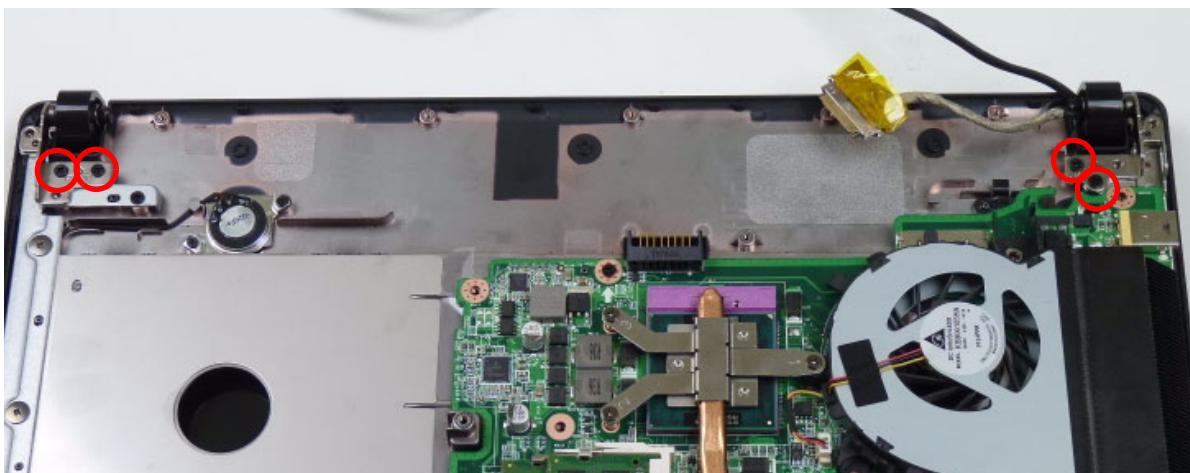
4. Unlock the LVDS cable.



5. Disconnect the LVDS cable.

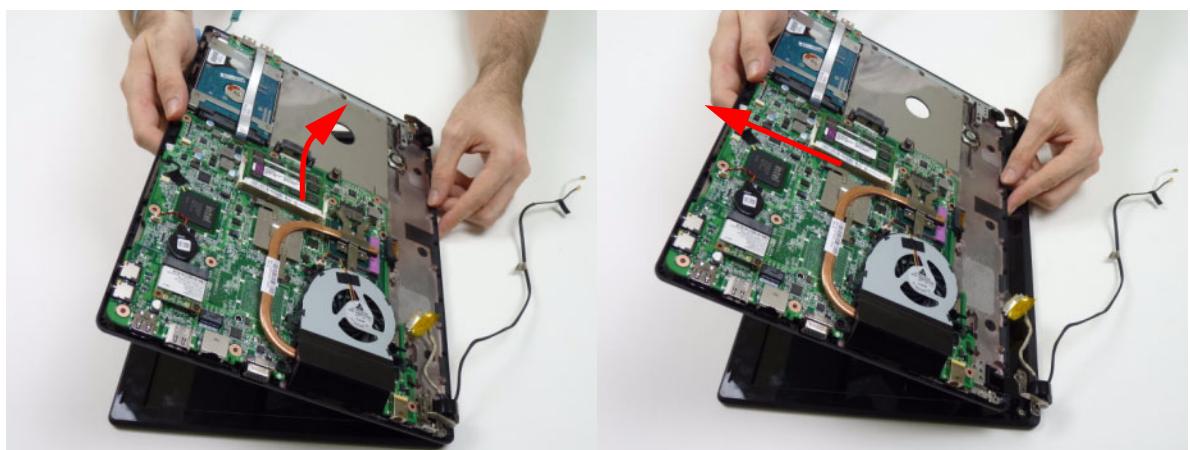


6. Remove the four (4) screws from the left and right hinges.



Step	Size	Quantity	Screw Type
LCD Module Disassembly	M2.5*6.5-I	4	

7. Tilt the upper cover upwards slightly and separate it from the LCD module.

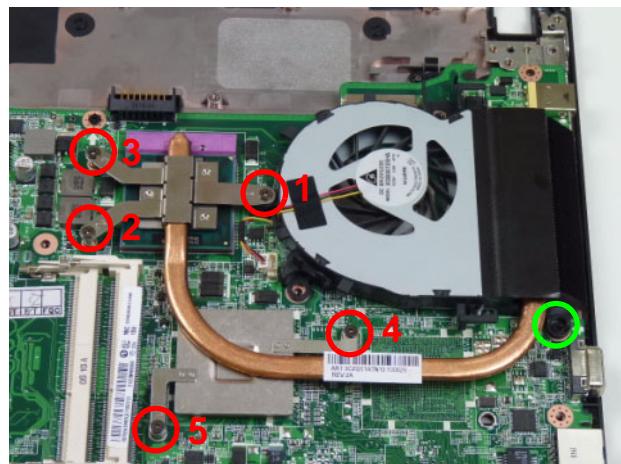


Removing the Thermal Module

1. See “Removing the LCD Module” on page 66.
2. Disconnect the fan cable as shown.



3. Loosen the five (5) captive screws (in numerical order from 1 to 5) and remove the one screw from the fan module.



Step	Size	Quantity	Screw Type
Thermal Module Disassembly	M2.5*4.0-L (green callout)	1	

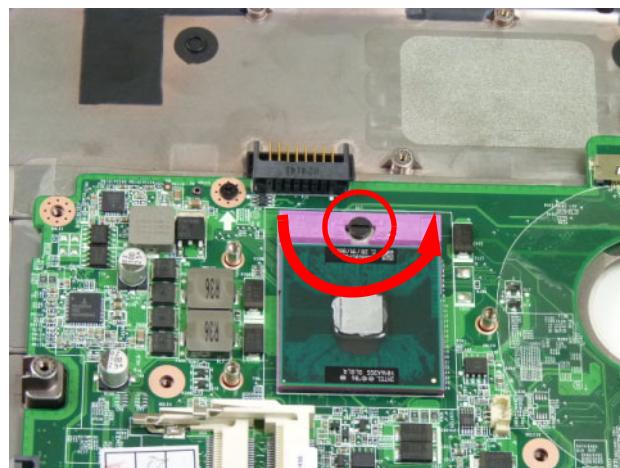
4. Carefully lift up the thermal module assembly and remove it from the mainboard.



IMPORTANT: Place the thermal module on a clean, dry surface when it is not installed.

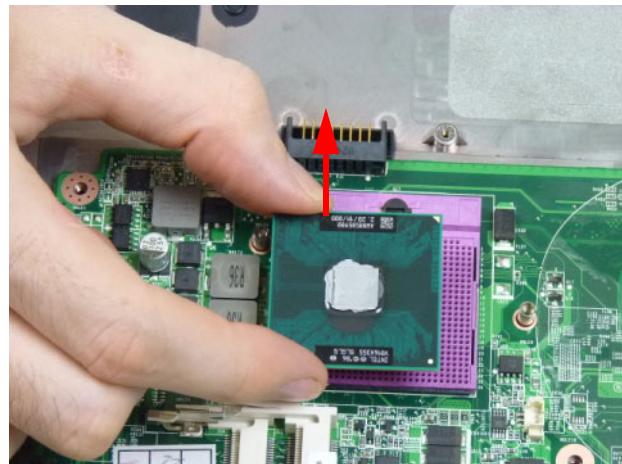
Removing the CPU

1. See "Removing the Thermal Module" on page 68.
2. Using a slotted screw driver, rotate the CPU locking screw 180° counter-clockwise as shown.



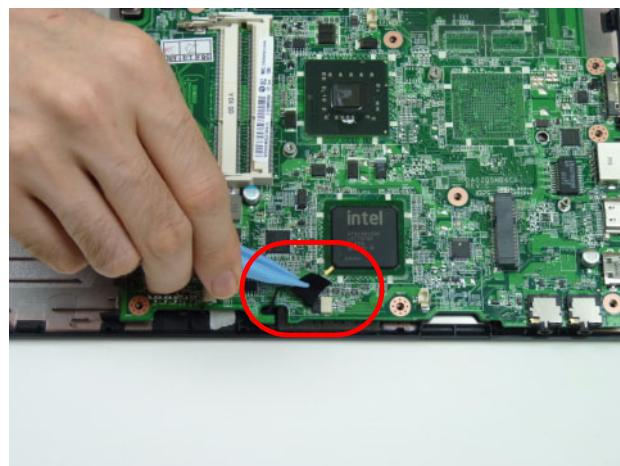
3. Carefully lift the CPU clear of the socket.

IMPORTANT: Place the CPU on a clean, dry surface when it is not installed.

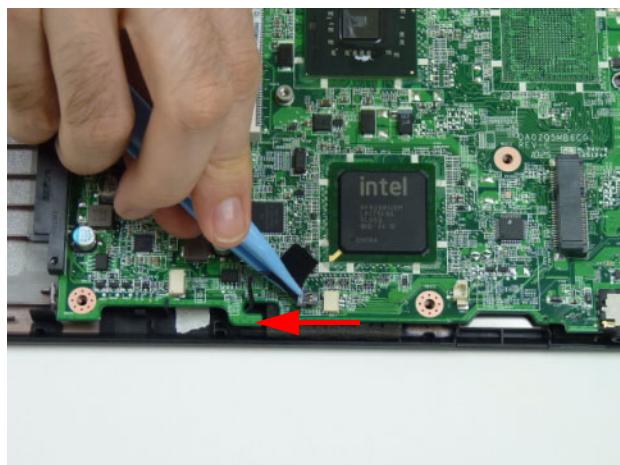


Removing the Mainboard

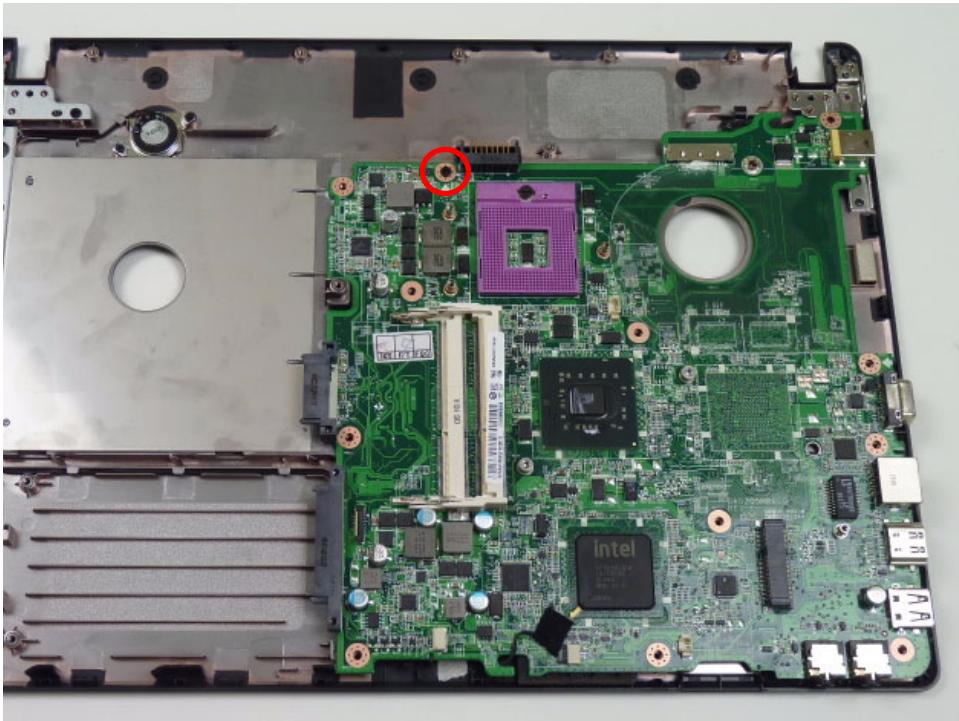
1. See “Removing the CPU” on page 69.
2. Remove the adhesive tape securing the speaker cable to the mainboard.



3. Disconnect the speaker cable from the mainboard connector.

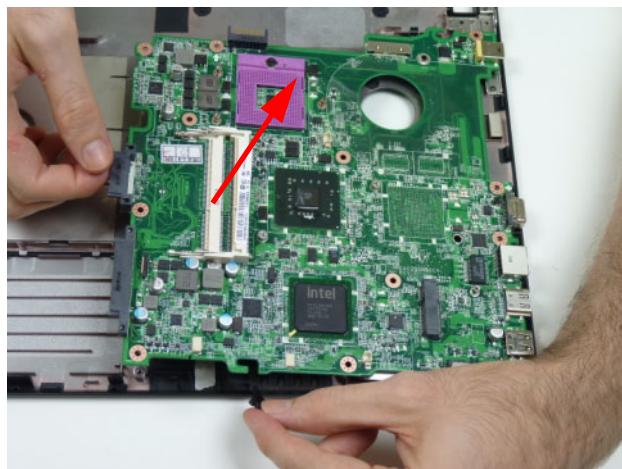


4. Remove the one (1) securing screw from the mainboard.



Step	Size	Quantity	Screw Type
Mainboard Disassembly	M2.5*4.0-l	1	

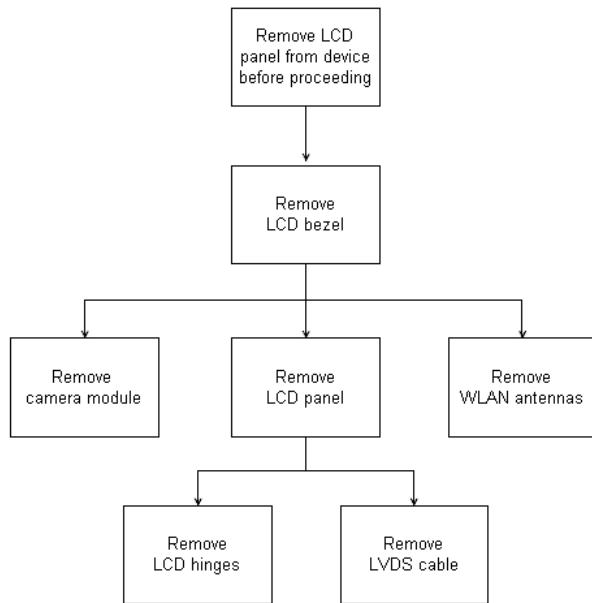
5. Lift the mainboard away the lower cover.



NOTE: The mainboard has been highlighted with a yellow callout in the previous image. Please detach the mainboard and follow local regulations for disposal.

LCD Module Disassembly Process

LCD Module Disassembly Flowchart



Screw List

Step	Screw	Quantity	Part No.
LCD Bezel Disassembly	M2.5*5-I	2	86.T23V7.010
LCD Panel Disassembly	M2.0*3.0-I	6	86.ARE07.002
LCD Hinge Disassembly	M2.5*4.0-I	6	86.R6Z07.001

Removing the LCD Bezel

1. See “Removing the LCD Module” on page 66.
2. Remove the two (2) bezel screws from the LCD module.



Step	Size	Quantity	Screw Type
LCD Bezel Disassembly	M2.5*5.0-l	2	

3. Pry the bezel upwards at the top of the LCD module releasing it from the latches.



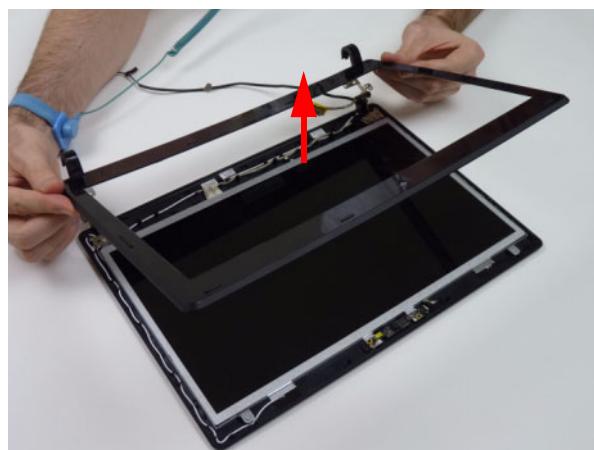
4. Continue separating the latches along the sides of the bezel towards the hinges.



5. Release the latches at the bottom of the LCD bezel.

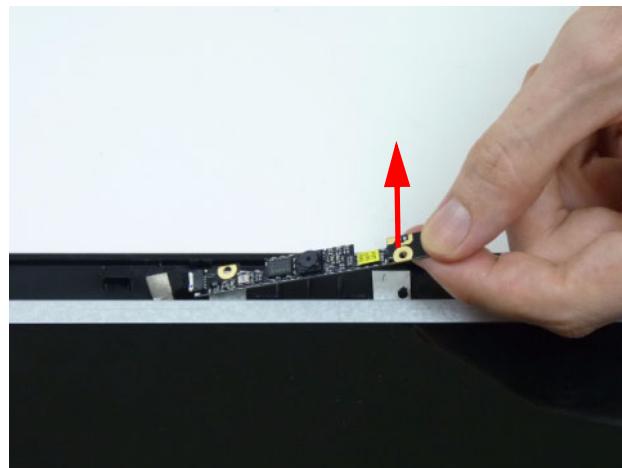


6. Lift the Bezel clear of the LCD module.

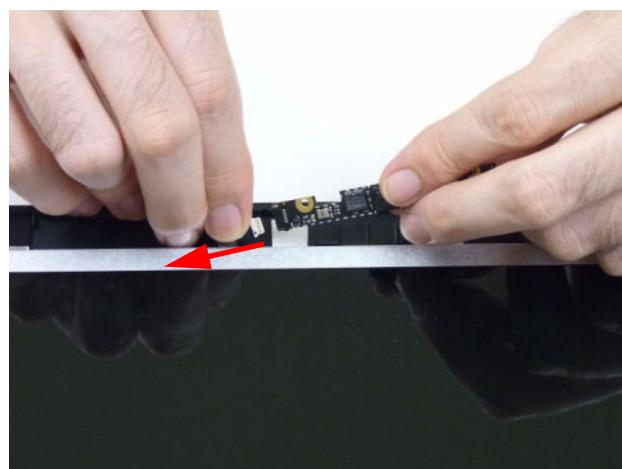


Removing the Camera Module

1. See “Removing the LCD Bezel” on page 75.
2. Lift the camera module from the LCD cover.



3. Disconnect the cable as shown.



NOTE: Take care not to damage the cable.

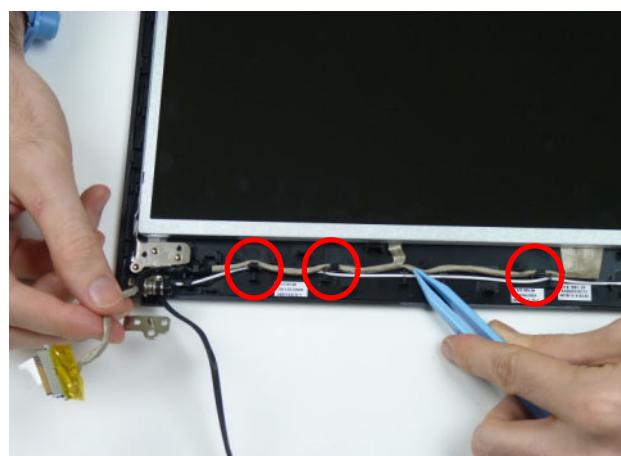
Removing the LCD Panel

1. See "Removing the LCD Bezel" on page 75.
2. Remove the six (6) securing screws from the LCD panel.



Step	Size	Quantity	Screw Type
LCD Panel Disassembly	M2.5*4.0-I	6	

3. Remove the LVDS cable from the cable guides.



4. Lift the LCD panel clear of the LCD cover as shown.



Remove the LCD Hinges

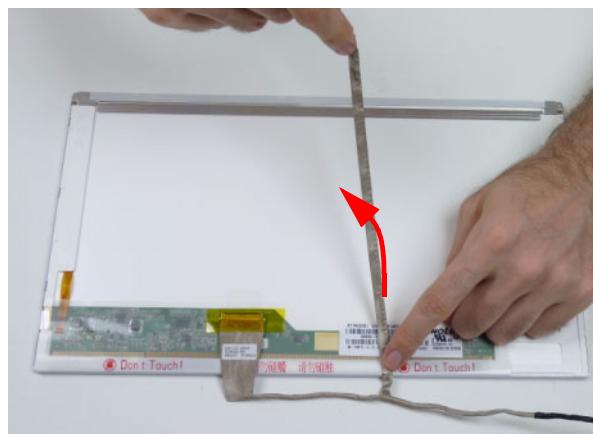
1. See "Removing the LCD Panel" on page 78.
2. Remove the six (6) screws, 3 on each side. Separate the hinges from the LCD panel.



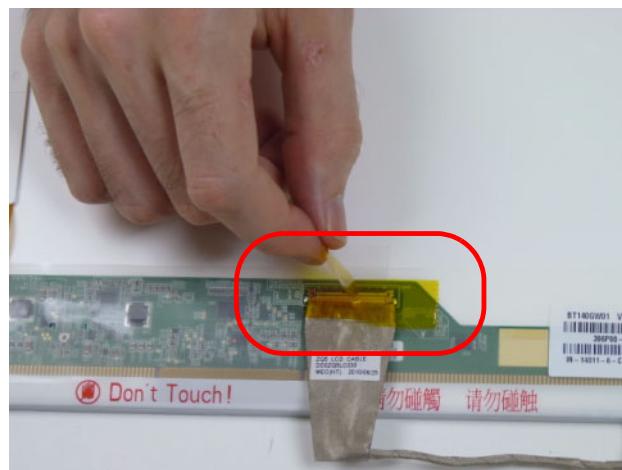
Step	Size	Quantity	Screw Type
LCD Hinge Disassembly	M2.0*3.0-I	6	

Removing the LVDS Cable

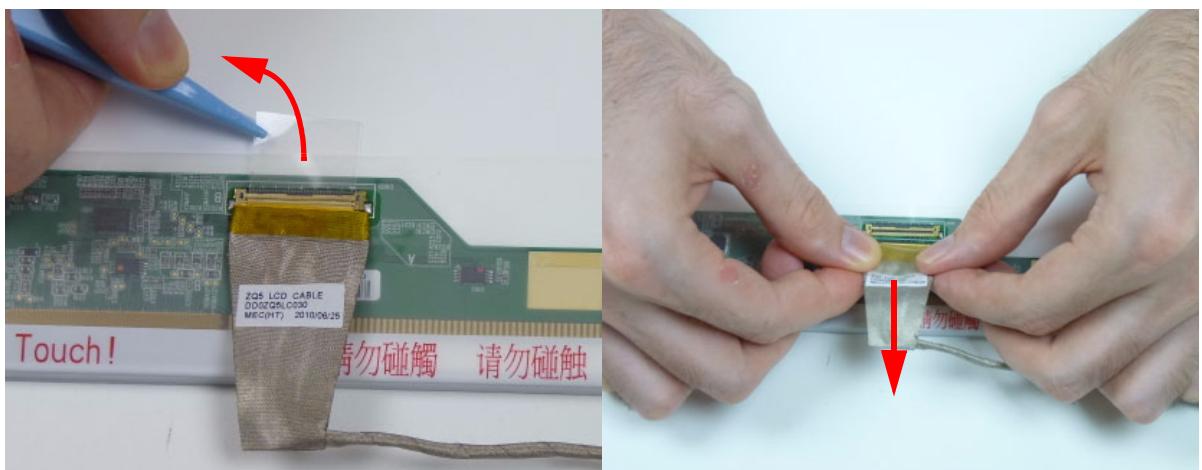
1. See "Removing the LCD Panel" on page 78.
2. Detach the camera cable from the back of the LCD panel.



3. Remove the yellow tape securing the LVDS cable.

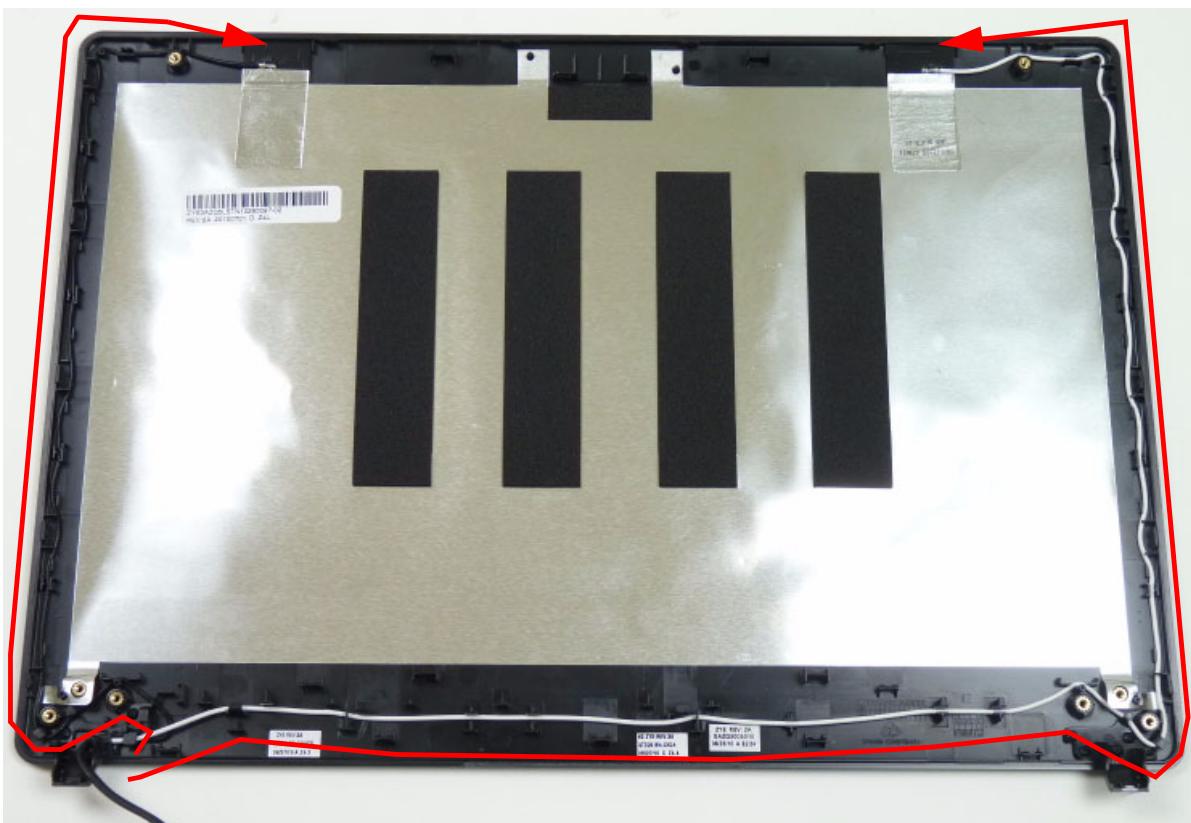


4. Starting from the top, remove the clear mylar covering and disconnect the LVDS cable from the LCD panel.

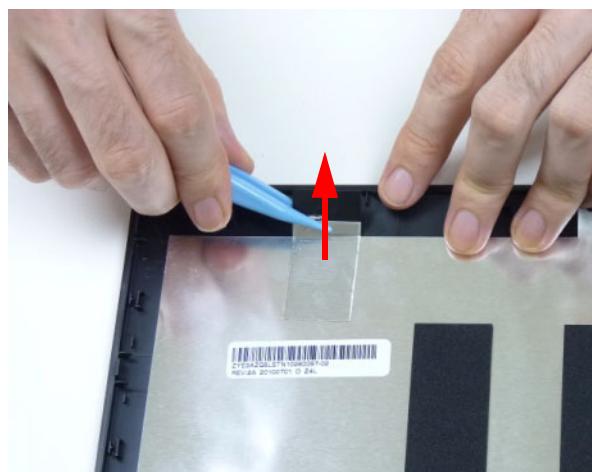


Removing the WLAN Antennas

1. See "Removing the LCD Panel" on page 78.
2. Remove the black and white WLAN antennas from the cable guides.



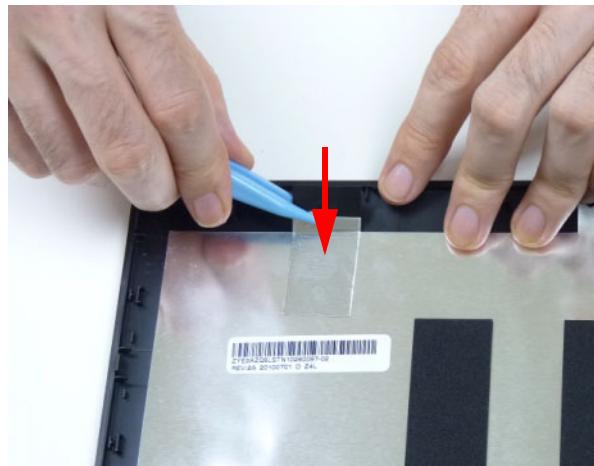
3. Remove the black antenna cable from the LCD cover. Repeat for the white antenna.



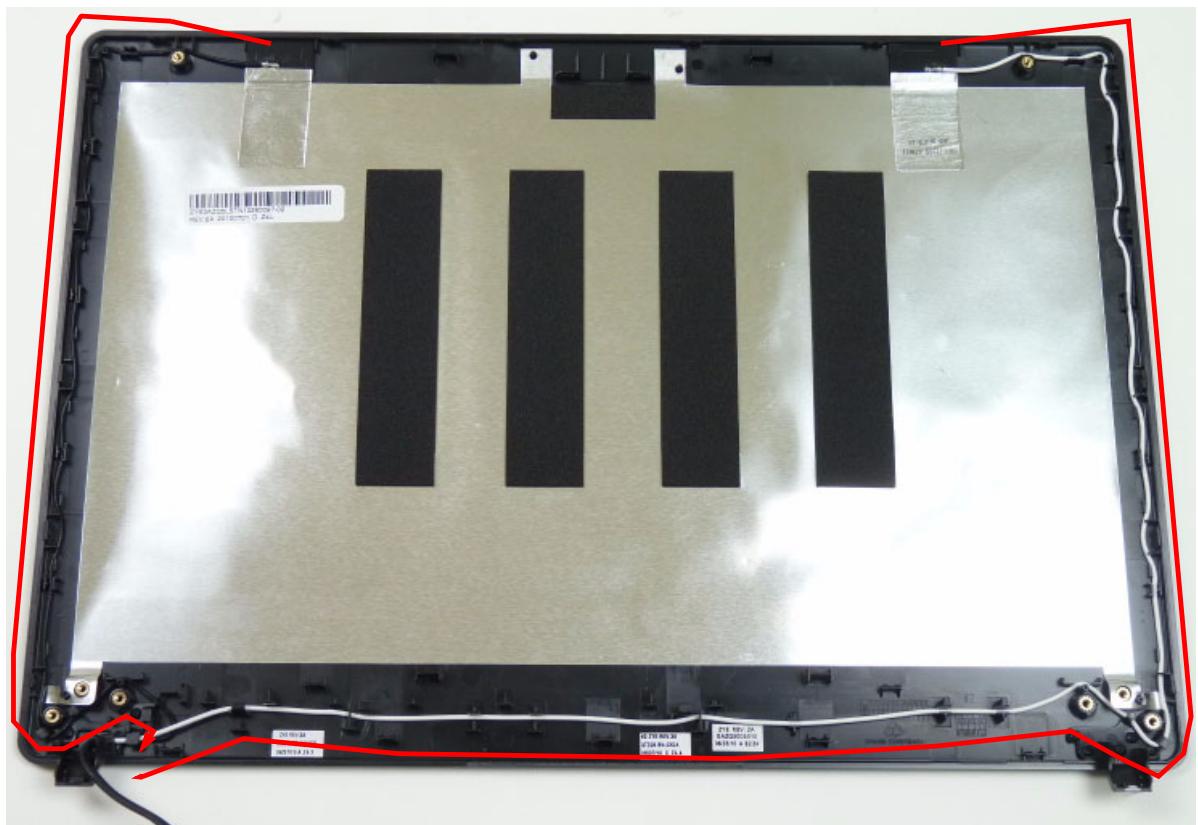
LCD Module Assembly Process

Replacing the WLAN Antennas

1. Place the black antenna cable onto the LCD cover as shown. Repeat for the white antenna.



2. Place the black and white WLAN antennas into the cable guides as shown.

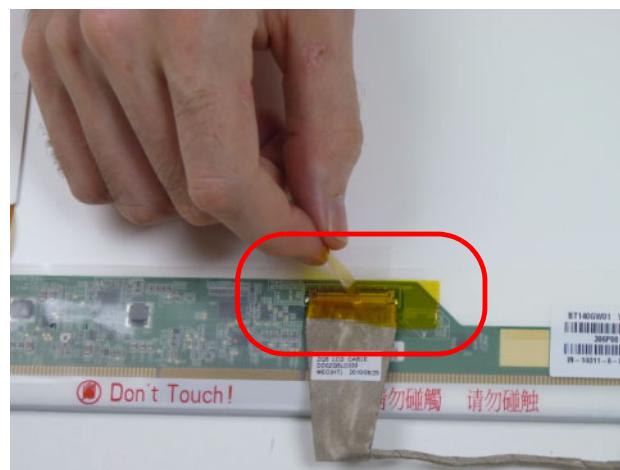


Replacing the LVDS Cable

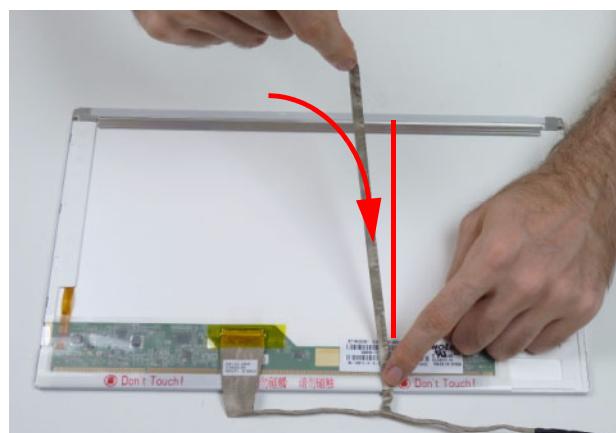
1. Turn the LCD panel face down on a non-abrasive, clean surface. Ensure the panel face does not get damaged. Connect the LVDS cable to the LCD panel. Place the clear mylar tape over the connector and press firmly.



2. Replace the yellow adhesive tape to secure the LVDS cable.



3. Adhere the camera cable to the LCD panel.



NOTE: Ensure the camera cable is placed as shown to prevent damage to the camera.

Replacing the LCD Hinges

1. See "Removing the LCD Panel" on page 78.
2. Replace the six (6) screws, 3 on each side to secure the hinges.



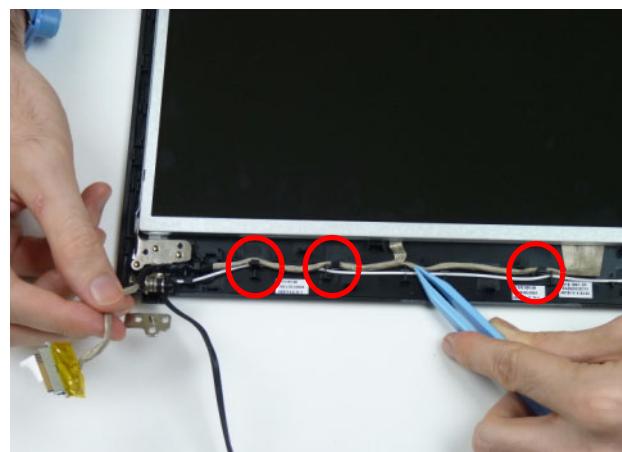
Step	Size	Quantity	Screw Type
LCD Hinge Disassembly	M2.0*3.0-I	6	

Removing the LCD Panel

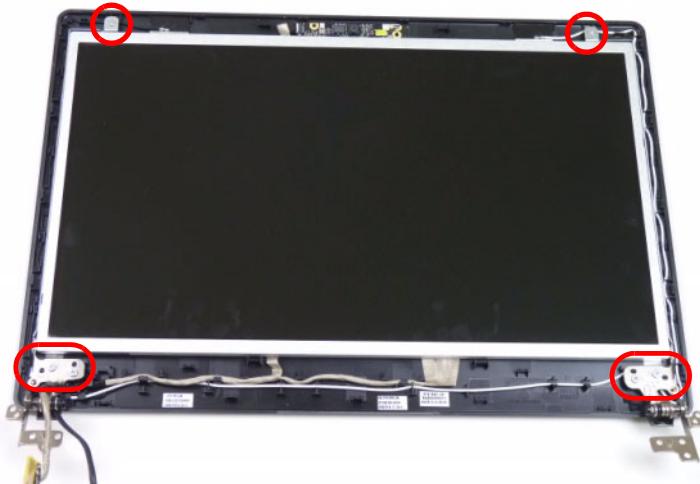
1. Place the LCD panel on the LCD cover as shown.



2. Place the LVDS cable into the cable guides.



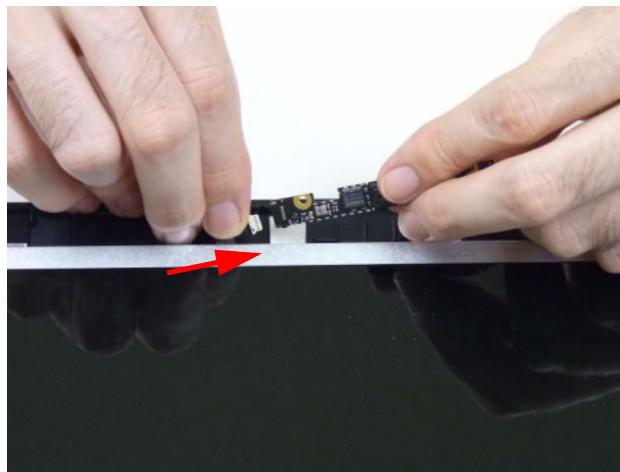
3. Replace the six (6) securing screws to secure the LCD panel.



Step	Size	Quantity	Screw Type
LCD Panel Disassembly	M2.5*4.0-I	6	

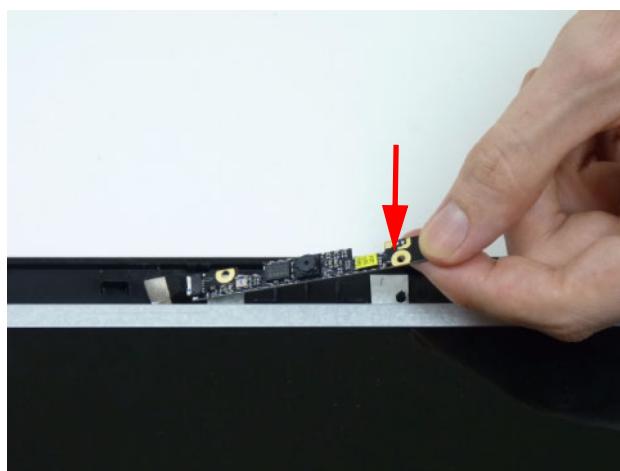
Replacing the Camera Module

1. Connect the camera cable as shown.



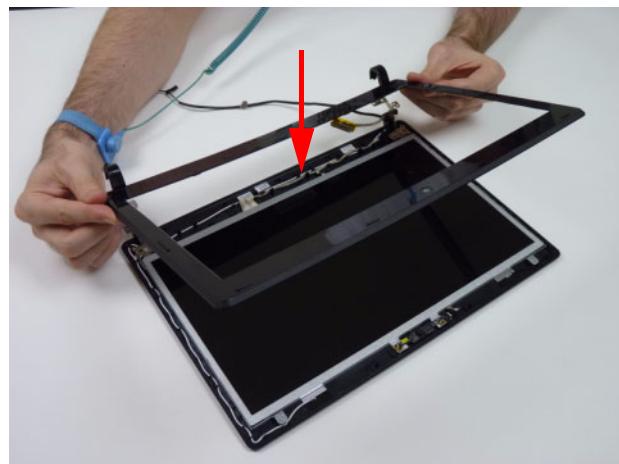
NOTE: Take care not to damage the cable.

2. Place the camera module onto the LCD cover. Apply gentle pressure to fix the adhesive.

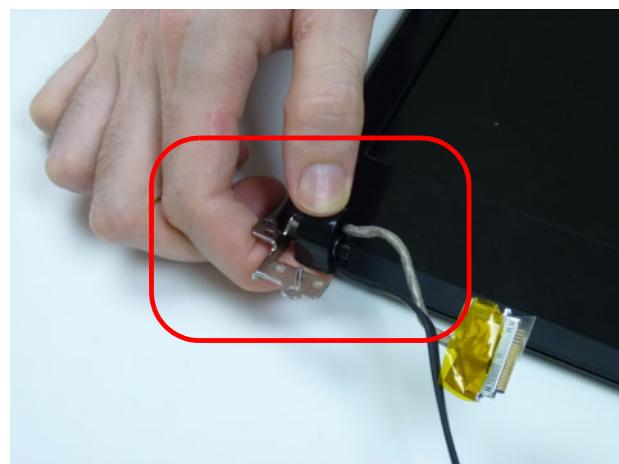


Replacing the LCD Bezel

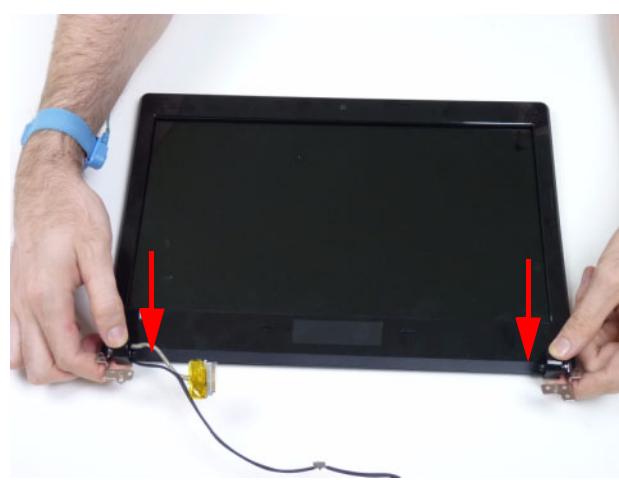
1. Place the bezel hinge covers over the hinges.



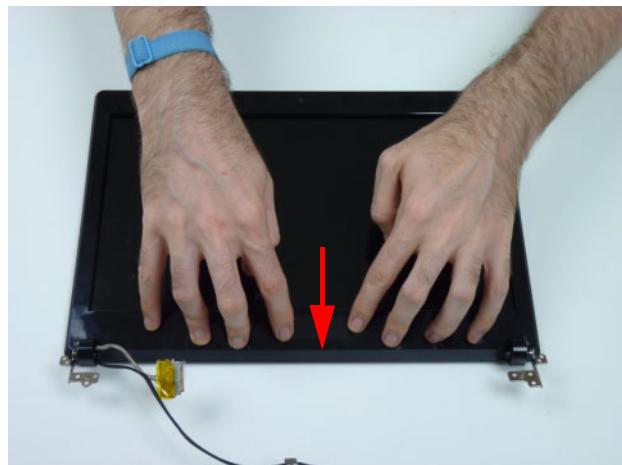
2. Ensure the LVDS and WLAN antenna cable bundle are exiting the left hinge as shown.



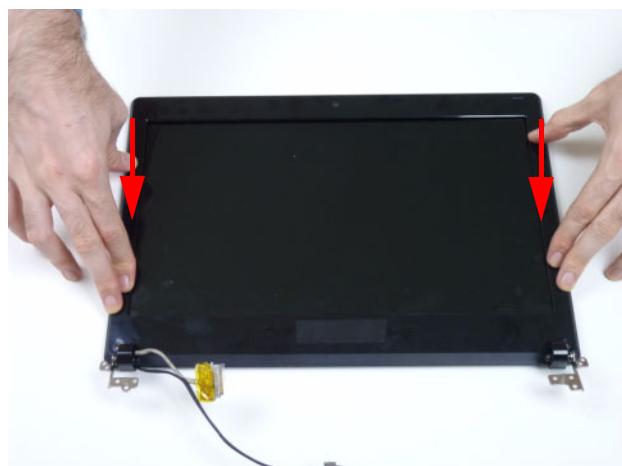
3. Apply pressure to snap the latches together.



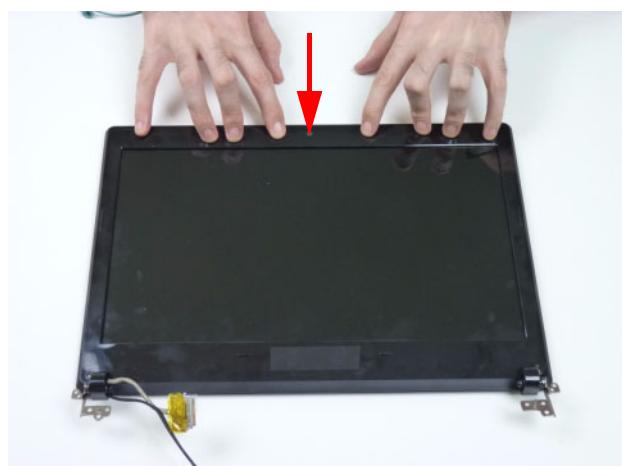
4. Apply pressure along the bottom of the bezel to attach the latches.



5. Apply pressure along the sides of the bezel to attach the latches.



6. Apply pressure along the top of the bezel to attach the latches.



7. Replace the two (2) bezel screws.

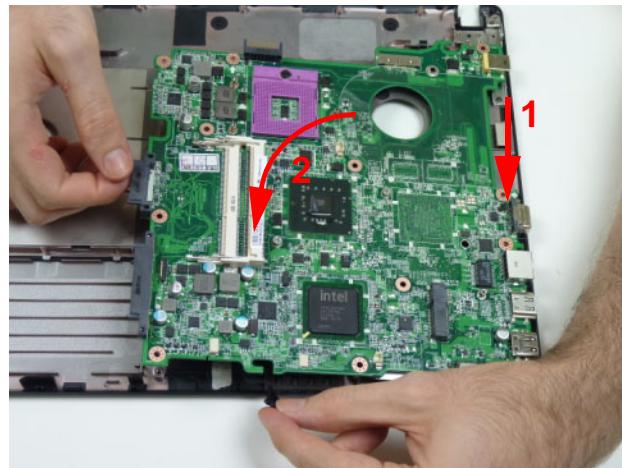


Step	Size	Quantity	Screw Type
LCD Bezel Disassembly	M2.5*5.0-I	2	

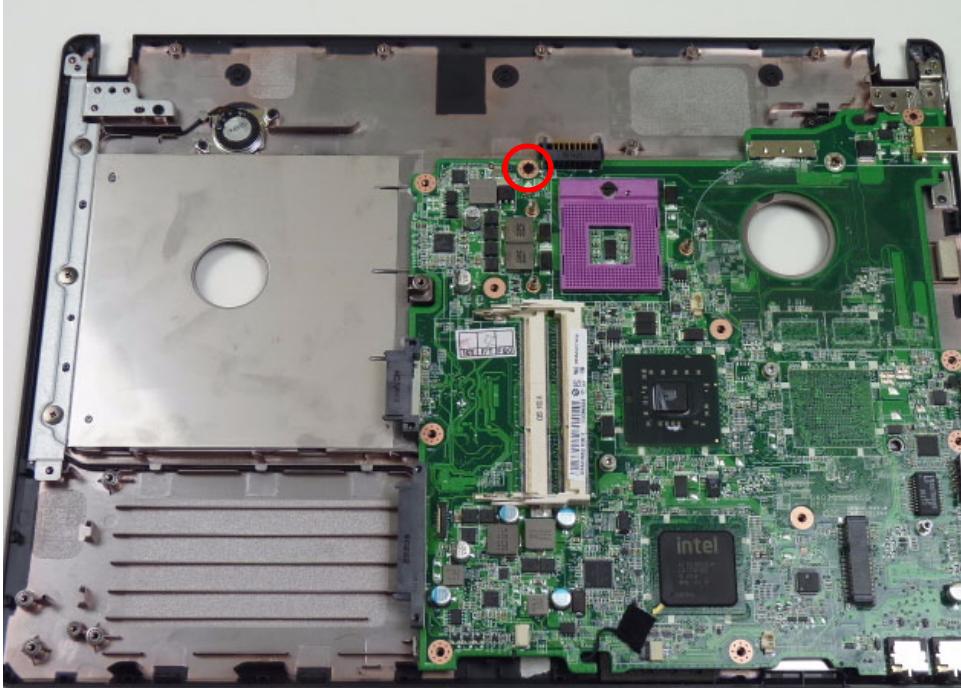
Main Unit Assembly Process

Replacing the Mainboard

1. Place the mainboard onto the upper cover left side first to align the screw holes (1) and then lower the right side (2).

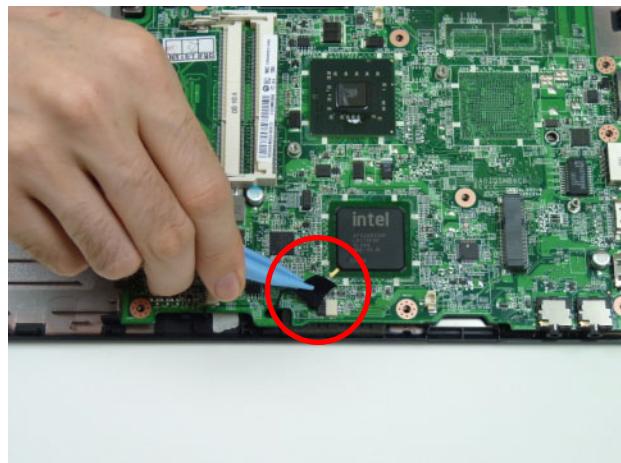


2. Replace the one (1) screw to secure the mainboard to the upper cover.

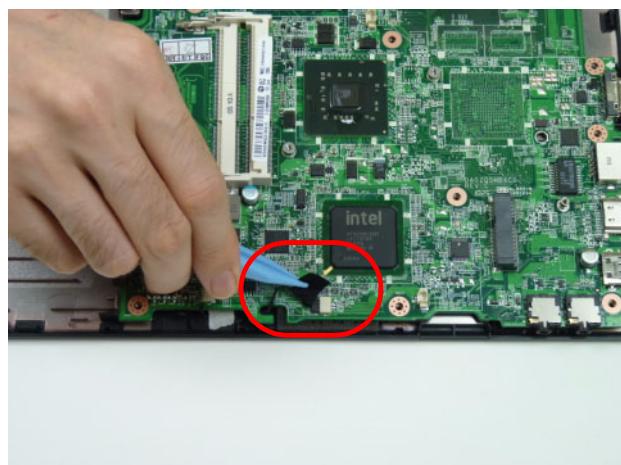


Step	Size	Quantity	Screw Type
Mainboard Disassembly	M2.5*4.0-I	1	

3. Connect the speaker cable to the mainboard.



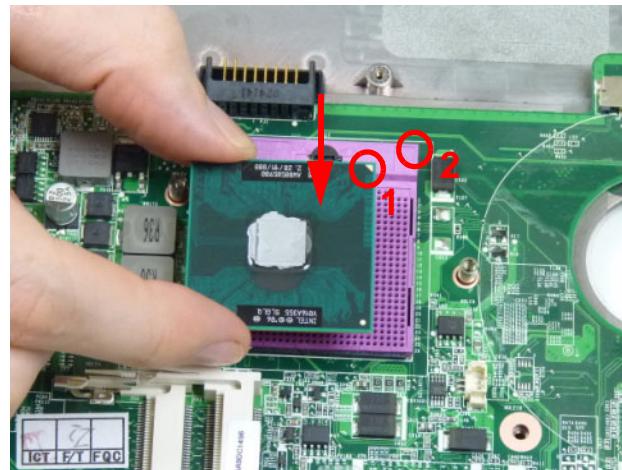
4. Secure the speaker cable to the mainboard using the adhesive tape connected to the cable.



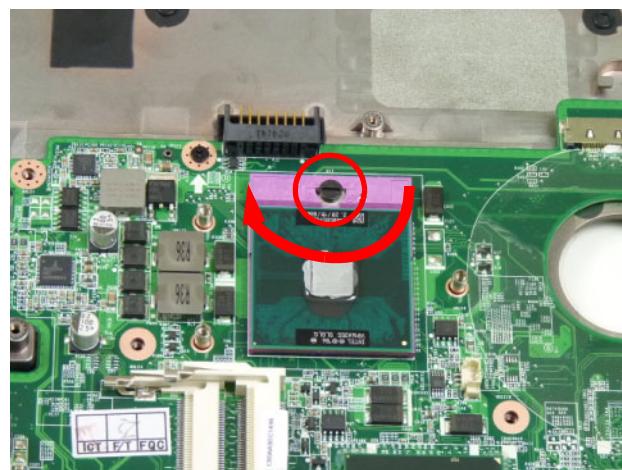
Replacing the CPU

IMPORTANT: The CPU has a Pin1 locator (1) that must be positioned corresponding to the marker (2) on the CPU socket.

1. Place the CPU into the CPU socket as shown, taking note of the Pin1 locator.



2. Using a slotted screw driver, rotate the CPU locking screw 180° clockwise as shown to secure it in the package.



Replacing the Thermal Module

IMPORTANT: Apply suitable thermal pads before replacing the thermal module

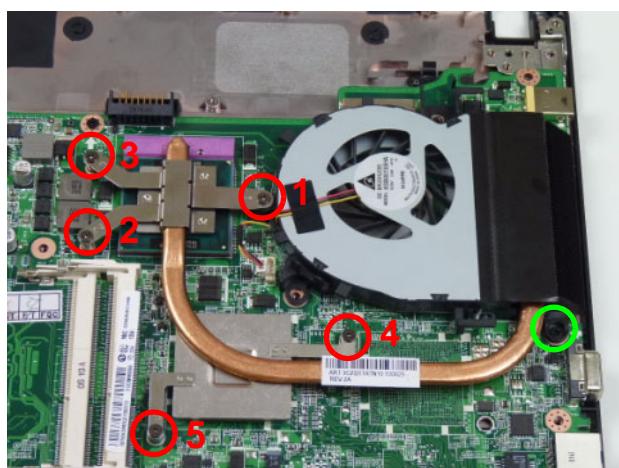
The following thermal materials are approved for use:

- Thermal grease compound
- Eapus PSX-D
- Thermal pad
- Denka FSL-BS B6

1. Remove all traces of thermal material from the CPU and thermal module using a lint-free cloth or cotton swab and Isopropyl Alcohol, Acetone, or other approved cleaning agent.
2. Apply a new thermal pad or grease to the center of the processor(s) coming into contact with the thermal module.
3. Align the screw holes on the thermal module to the screw posts on the mainboard, then replace the module. Keep the module as level as possible when replacing.



4. Tighten the five (5) captive screws (in numerical order from 1 to 5) and replace the one (1) screw to secure the CPU thermal module.



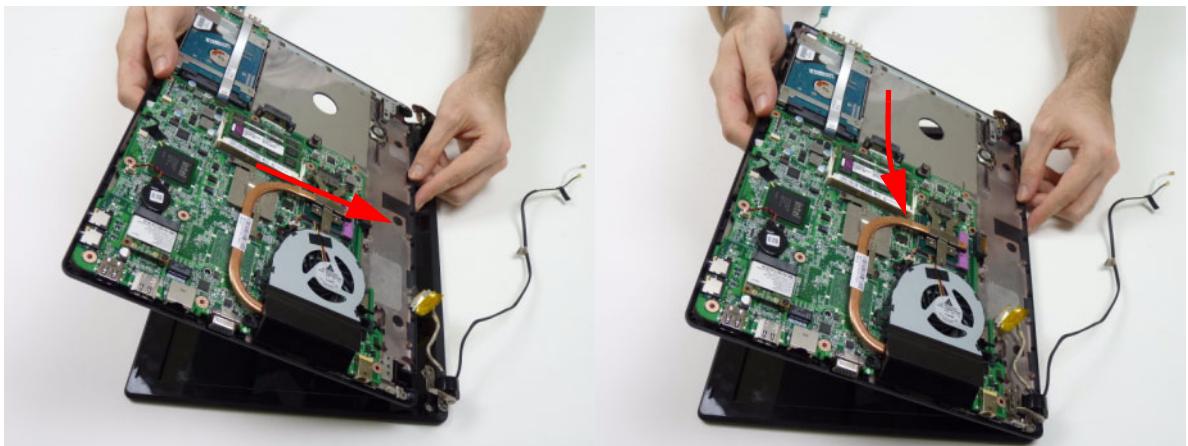
Step	Size	Quantity	Screw Type
Thermal Module Disassembly	M2.5*4.0-l (green callout)	1	

5. Connect the fan cable as shown.

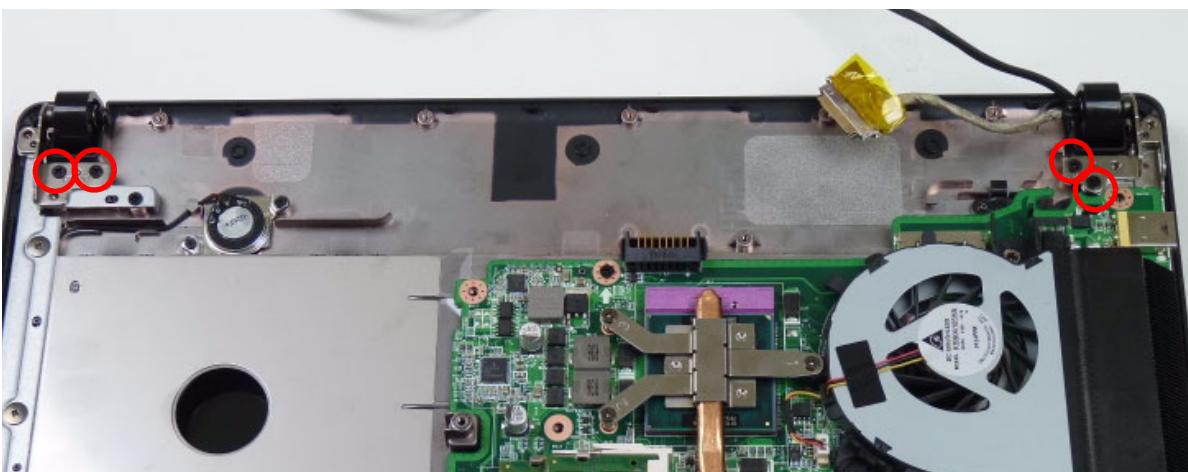


Replacing the LCD Module

1. Place the upper cover onto the LCD module and lower into place. Lower the hinges so they are flush with the hinge plates on the upper cover.

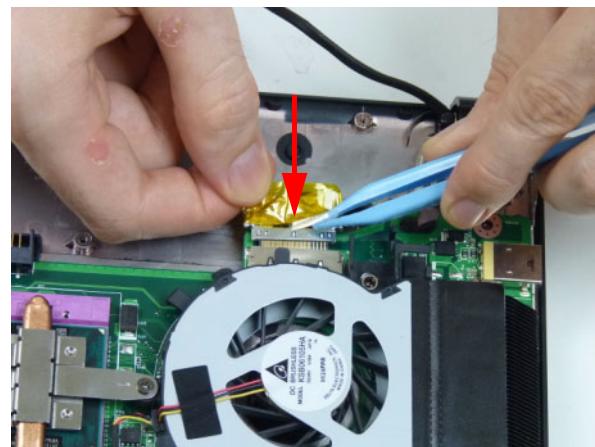


2. Replace the four (4) screws to secure the left and right hinges.

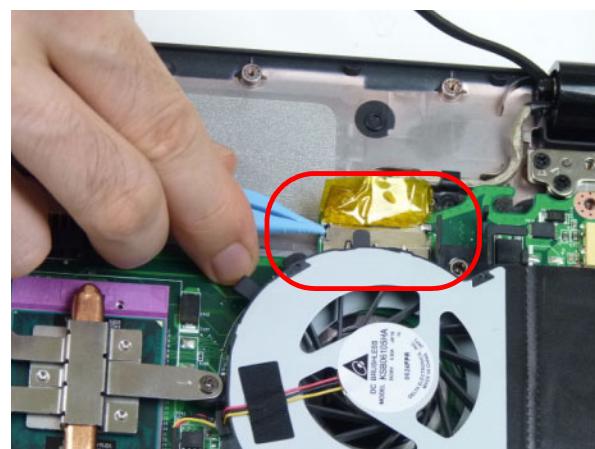


Step	Size	Quantity	Screw Type
LCD Module Disassembly	M2.5*6.5-l	4	

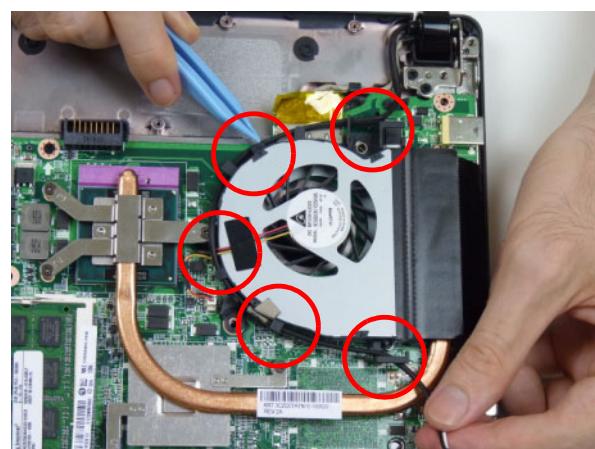
3. Connect the LVDS cable.



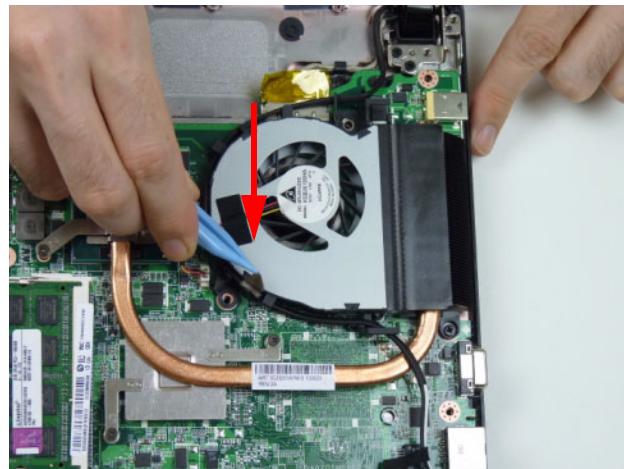
4. Lock the LVDS cable.



5. Place the WLAN antenna bundle into the cable guides around the fan module.

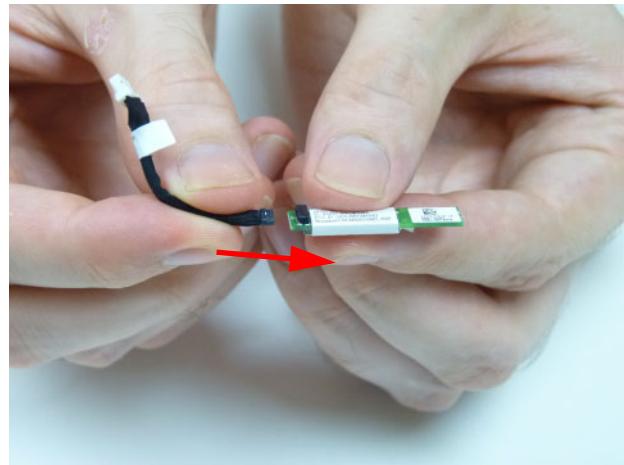


6. Place the adhesive ground wire attached to the WLAN antenna cable bundle onto the fan housing.



Replacing the Bluetooth Module

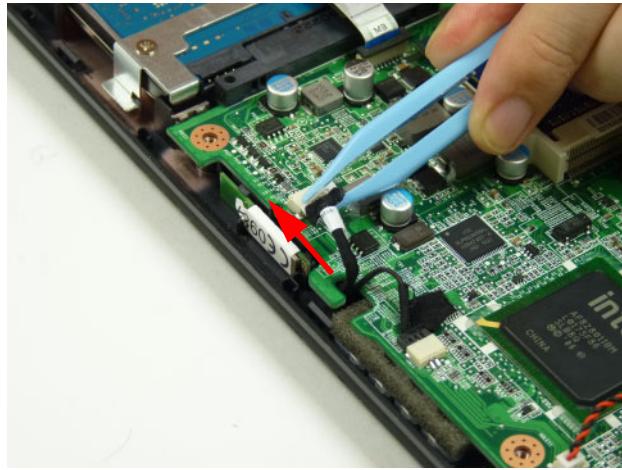
1. Connect the Bluetooth cable to the Bluetooth board.



2. Place the connector edge of Bluetooth board into the guides as shown and then place the other end down onto the upper cover.

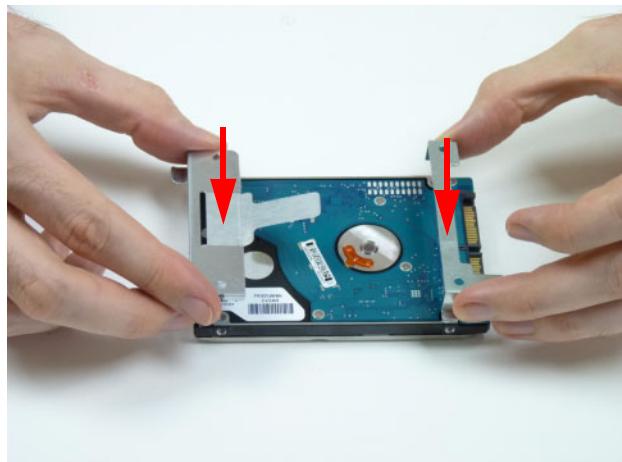


3. Connect the Bluetooth cable to the mainboard connector.

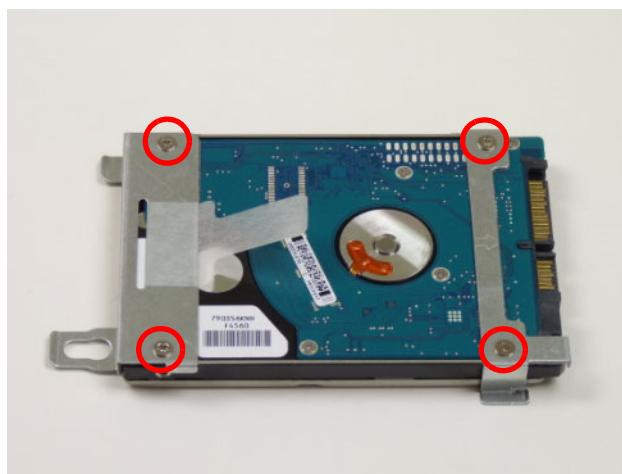


Replacing the HDD Module

1. Place the carrier onto the HDD.

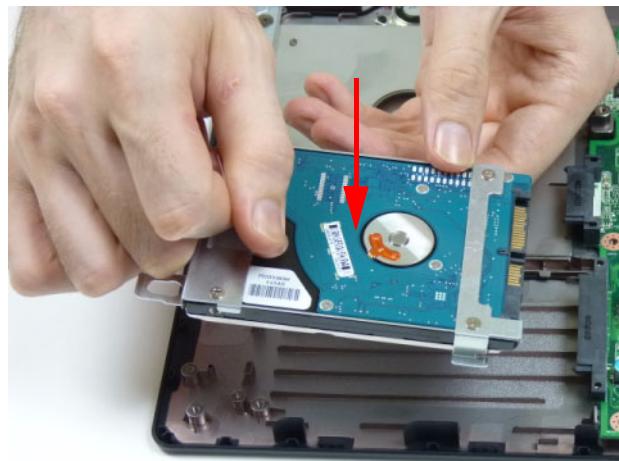


2. Replace the four (4) screws to secure the HDD carrier.

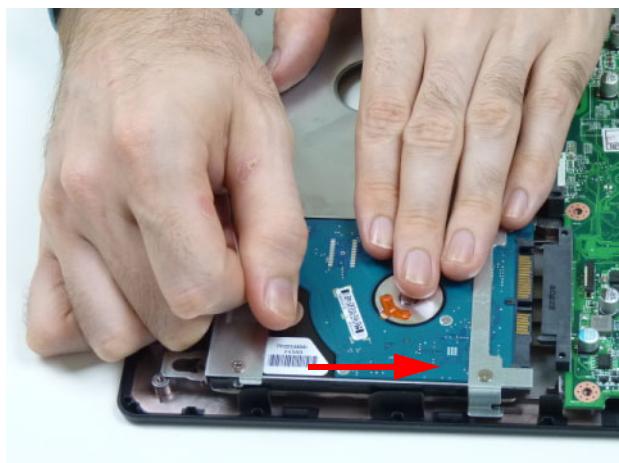


Step	Size	Quantity	Screw Type
HDD Carrier Disassembly	M3.0*3.5-NIH	4	

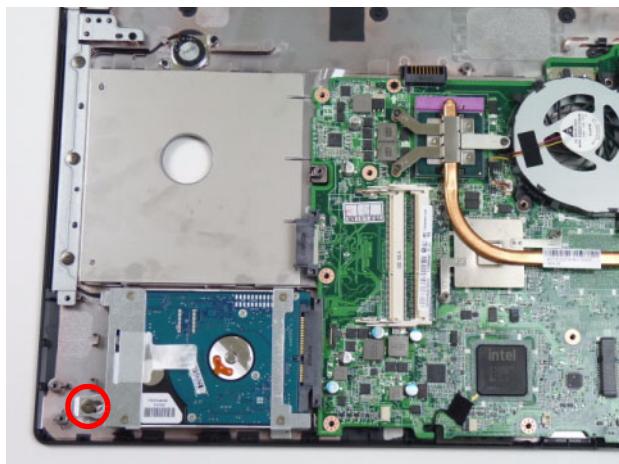
3. Place HDD in the HDD bay.



4. Using the pull-tab, slide the HDD module in the direction of the arrow to connect the interface.



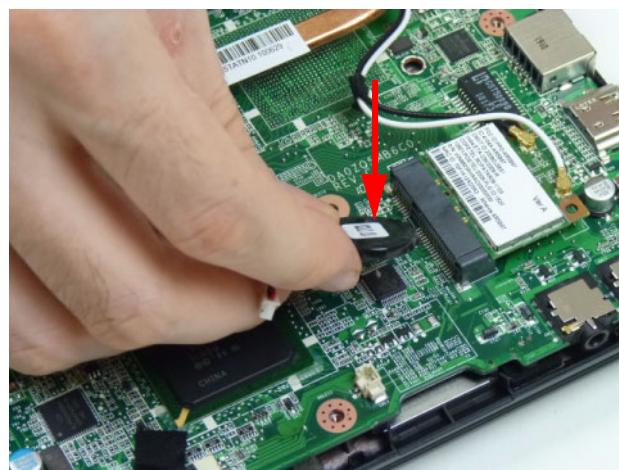
5. Replace the one (1) screw to secure the HDD module to the upper cover.



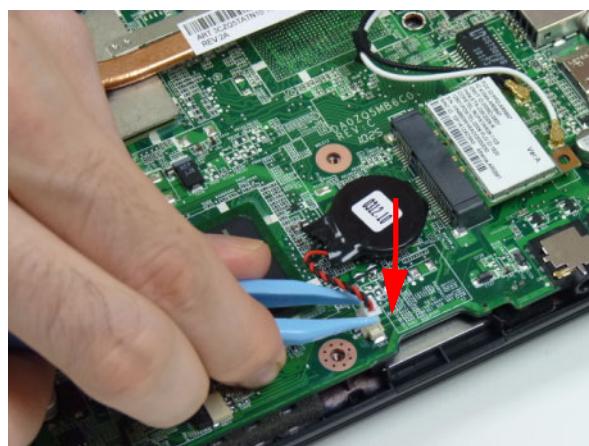
Step	Size	Quantity	Screw Type
HDD Module	M2-0.4*2-l	1	

Removing the RTC Battery

1. Place the RTC battery onto the mainboard.



2. Connect the RTC battery cable to the mainboard connector.



Replacing the USB Board

1. Place the USB board onto the chassis.

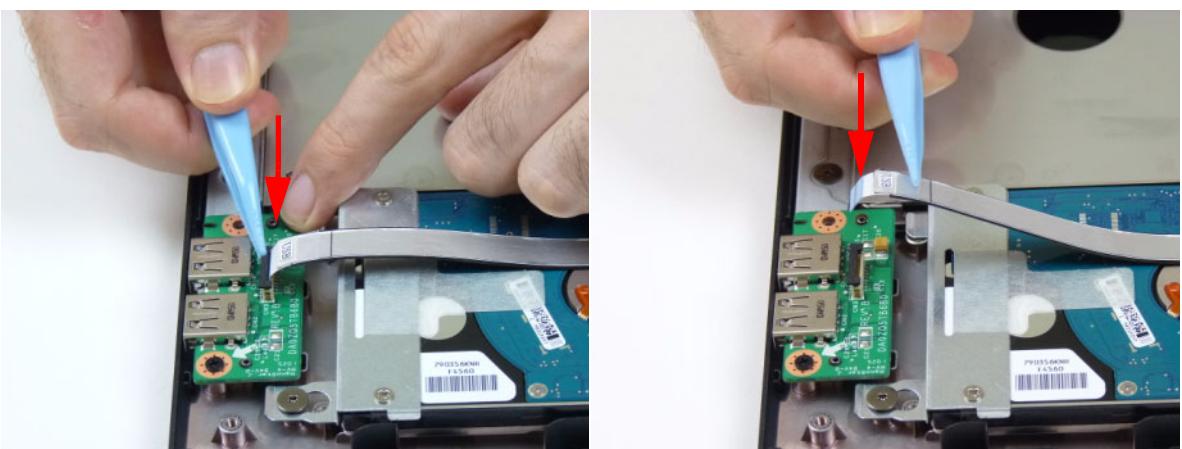


2. Replace one (1) screw to secure the USB board.



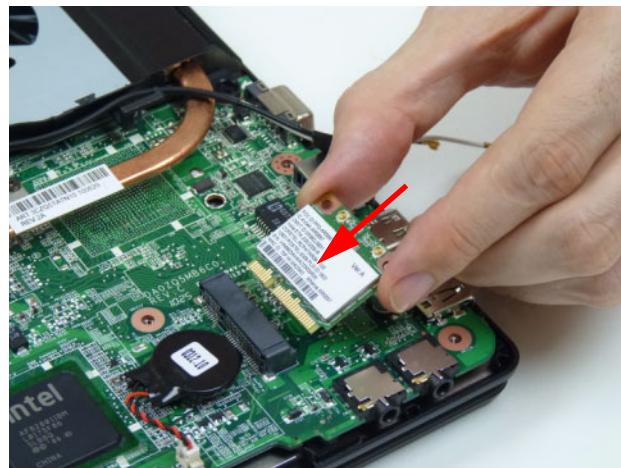
Step	Size	Quantity	Screw Type
USB Board Disassembly	M2.5*4.0-I	1	

3. Connect and lock the USB FFC to the USB board. Repeat for the mainboard connector.



Replacing the WLAN Module

1. Insert the WLAN board into the WLAN socket.

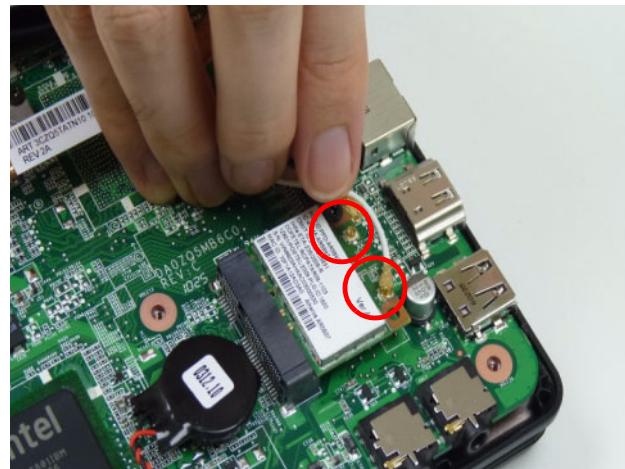


2. Replace the one (1) screw.



Step	Size	Quantity	Screw Type
WLAN Board Disassembly	M2.0*3.0-I	1	

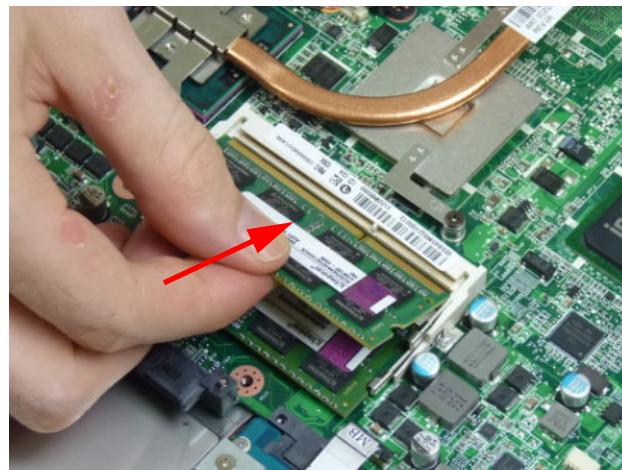
3. Connect the two (2) antenna cables to the WLAN board as shown.



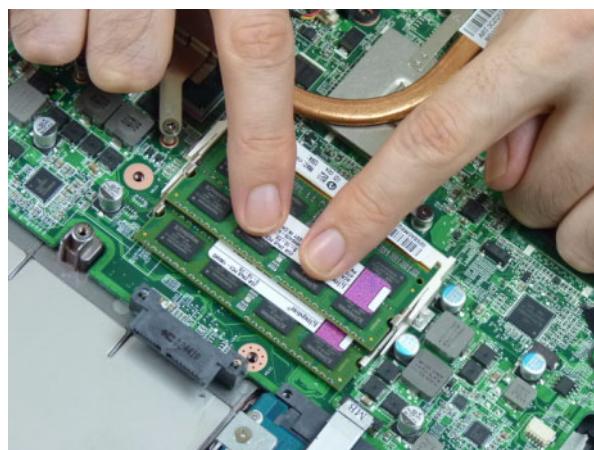
NOTE: Cable placement is as follows: black (Main) to connector J1, white (AUX) to connector J2.

Replacing the DIMM Modules

1. Insert the DIMM module into the DIMM connector.



2. Press down to lock the DIMM module in place.



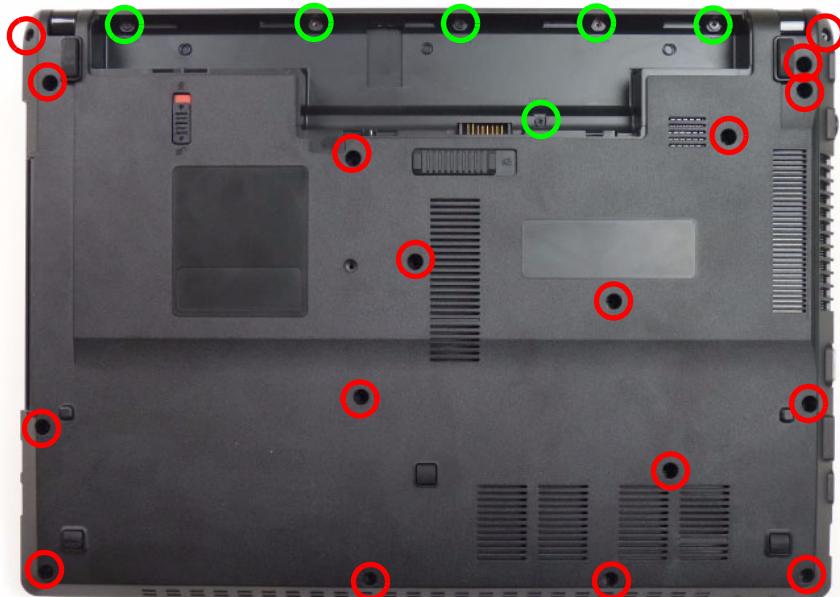
3. Repeat steps 1 and 2 for the second DIMM module if present.

Replacing the Lower Cover

1. Place the lower cover onto the device.



2. Replace the twenty three (23) screws to secure the lower cover to the device.



Step	Size	Quantity	Screw Type
Lower Cover (red callout)	M2.5*6.5-l	17	
Battery Bay (green callout)	M2.0*3.0-l	6	

External Module Assembly Process

Replacing the ODD Module

1. Place the ODD bracket onto the ODD module and replace the two (2) screws to secure it.

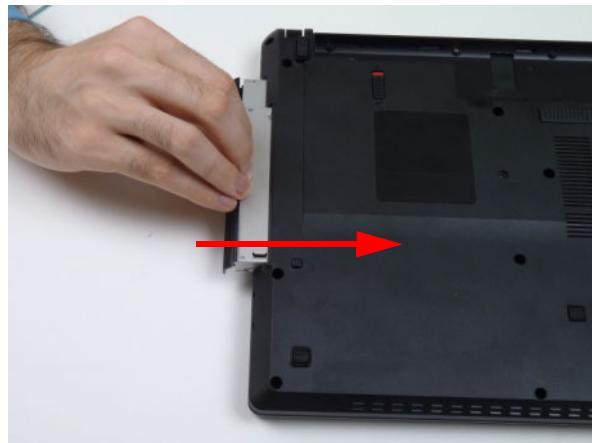


Step	Size	Quantity	Screw Type
ODD Bracket Disassembly	M2.0*3.0-I	2	

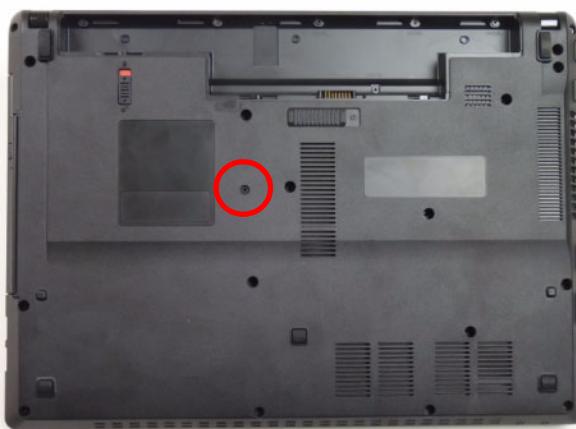
2. Press the bezel into the tray, bottom edge first, to secure it to the ODD module.



- Push the ODD module into the ODD bay until it is flush with the casing.



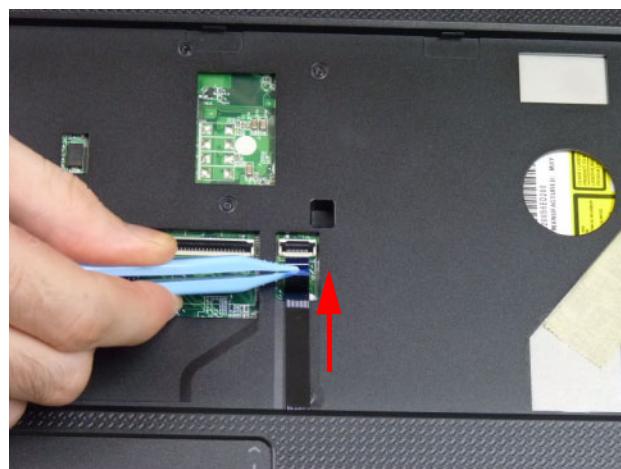
- Replace the one (1) screw to secure the module.



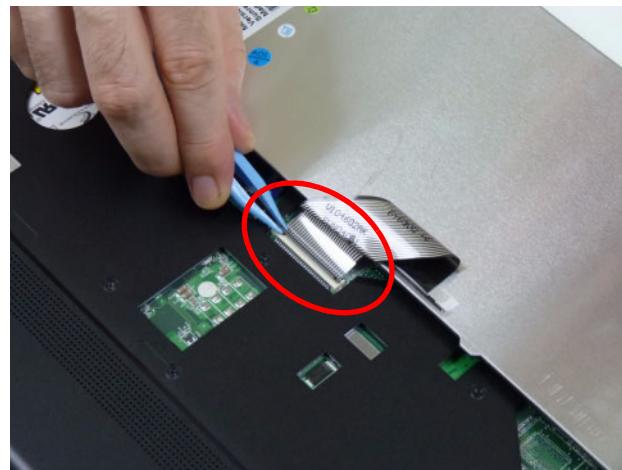
Step	Size	Quantity	Screw Type
ODD Bracket Disassembly	M2.5*6.5-l	1	

Replacing the Keyboard

- Connect and lock the Touchpad FFC to the mainboard connector.



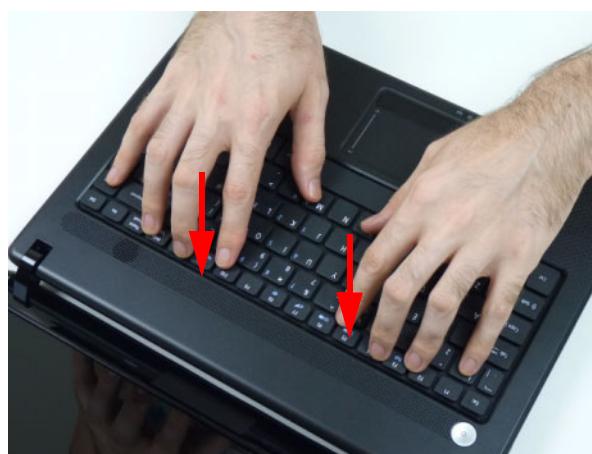
2. Place the keyboard face down on the upper cover. Connect the keyboard FPC to the mainboard and secure the locking latch.



3. Turn the keyboard over and slide the front edge into the upper cover, ensuring that the four locating tabs are correctly seated.



4. Press down as indicated to secure the keyboard in place.



Replacing the SD dummy card

1. Insert the SD dummy card into the slot and push until the card clicks into place and is flush with the casing.

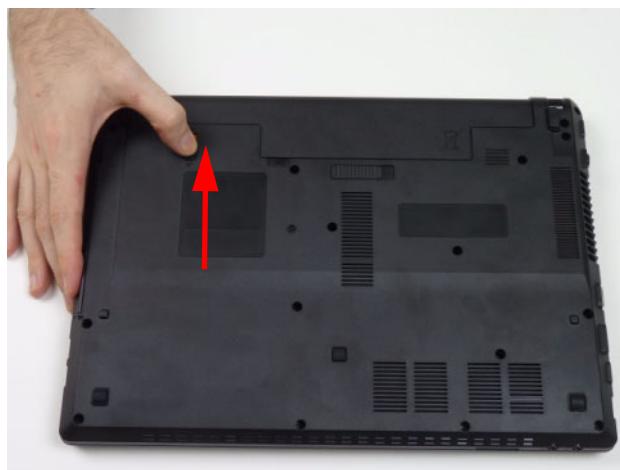


Replacing the Battery Pack

1. Insert the battery pack and press down.



2. Slide the battery lock in the direction shown to secure the battery in place.



Troubleshooting

Common Problems

Use the following procedure as a guide for computer problems.

NOTE: The diagnostic tests are intended to test only Acer products. Non-Acer products, prototype cards, or modified options can give false errors and invalid system responses.

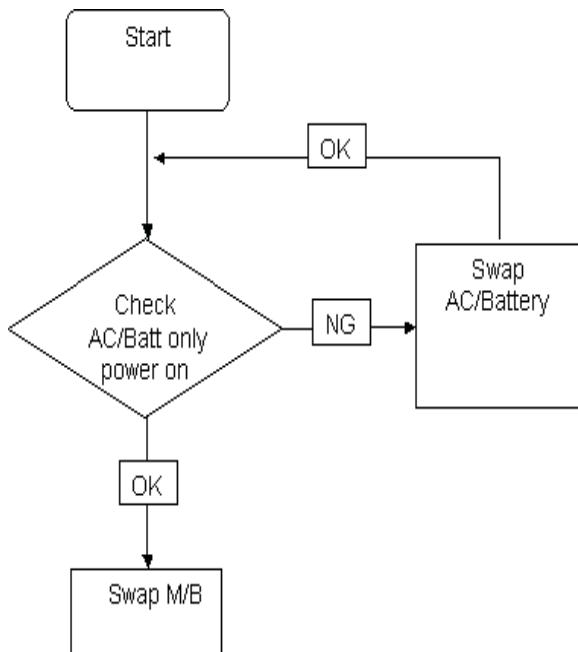
1. Obtain the failing symptoms in as much detail as possible.
2. Verify the symptoms by attempting to re-create the failure by running the diagnostic test or by repeating the same operation.
3. Use the following table with the verified symptom to determine which page to go to.

Symptoms (Verified)	Go To
Power On Issue	Page 112
No Display Issue	Page 113
LCD Failure	Page 115
Internal Keyboard Failure	Page 115
Touchpad Failure	Page 116
Internal Speaker Failure	Page 116
ODD Failure	Page 119
WLAN Failure	Page 122
Thermal Unit Failure	Page 122
Other Functions Failure	Page 123
Intermittent Failures	Page 124
Undermined Failures	Page 124

4. If the issue is still not resolved, see "Online Support Information" on page 155.

Power On Issue

If the system doesn't power on, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



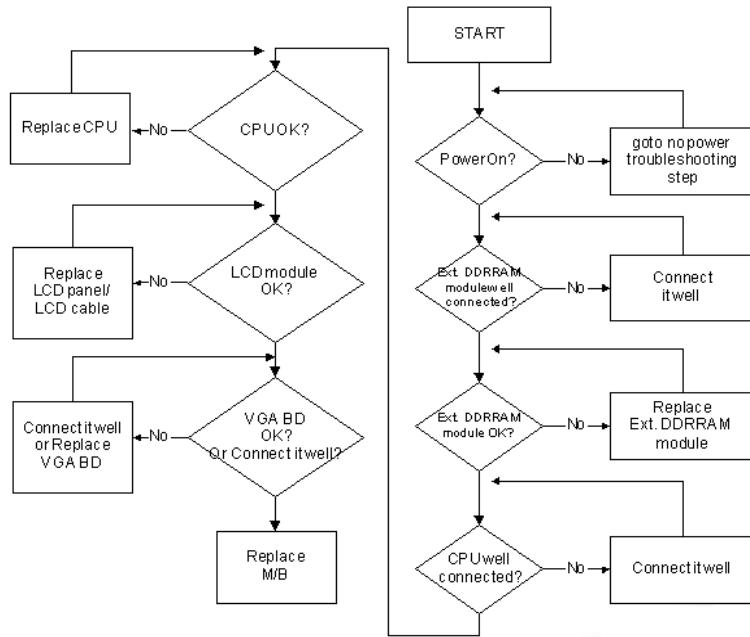
Computer Shutdown Intermittently

If the system powers off at intervals, perform the following actions one at a time to correct the problem.

1. Check the power cable is properly connected to the computer and the electrical outlet.
2. Remove any extension cables between the computer and the outlet.
3. Remove any surge protectors between the computer and the electrical outlet. Plug the computer directly into a known good electrical outlet.
4. Disconnect the power and open the casing to check the Thermal Unit (see "Thermal Unit Failure" on page 122) and fan airways are free of obstructions.
5. Remove all external and non-essential hardware connected to the computer that are not necessary to boot the computer to the failure point.
6. Remove any recently installed software.
7. If the issue is still not resolved, see "Online Support Information" on page 155.

No Display Issue

If the **Display** doesn't work, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



No POST or Video

If the POST or video doesn't display, perform the following actions one at a time to correct the problem.

1. Make sure that the internal display is selected. On this notebook model, switching between the internal display and the external display is done by pressing **Fn+F5**. Reference Product pages for specific model procedures.
2. Make sure the computer has power by checking at least one of the following occurs:
 - Fans start up
 - Status LEDs light upIf there is no power, see "Power On Issue" on page 112.
3. Drain any stored power by removing the power cable and battery and holding down the power button for 10 seconds. Reconnect the power and reboot the computer.
4. Connect an external monitor to the computer and switch between the internal display and the external display is by pressing **Fn+F5** (on this model).
If the POST or video appears on the external display, see "LCD Failure" on page 115.
5. Disconnect power and all external devices including port replicators or docking stations. Remove any memory cards and CD/DVD discs. Restart the computer.
If the computer boots correctly, add the devices one by one until the failure point is discovered.
6. Reseat the memory modules.
7. Remove the drives (see "Disassembly Process" on page 47).
8. If the issue is still not resolved, see "Online Support Information" on page 155.

Abnormal Video Display

If video displays abnormally, perform the following actions one at a time to correct the problem.

1. Reboot the computer.
2. If permanent vertical/horizontal lines or dark spots display in the same location, the LCD is faulty and should be replaced. See “Disassembly Process” on page 47.
3. If extensive pixel damage is present (different colored spots in the same locations on the screen), the LCD is faulty and should be replaced. See “Main Unit Disassembly Process” on page 55.
4. Adjust the brightness to its highest level. See the User Manual for instructions on adjusting settings.
NOTE: Ensure that the computer is not running on battery alone as this may reduce display brightness.
If the display is too dim at the highest brightness setting, the LCD is faulty and should be replaced. See “Disassembly Process” on page 47.
5. Check the display resolution is correctly configured:
 - a. Minimize or close all Windows.
 - b. If display size is only abnormal in an application, check the view settings and control/mouse wheel zoom feature in the application.
 - c. If desktop display resolution is not normal, right-click on the desktop and select **Personalize** → **Display Settings**.
 - d. Click and drag the Resolution slider to the desired resolution.
 - e. Click **Apply** and check the display. Readjust if necessary.
6. Roll back the video driver to the previous version if updated.
7. Remove and reinstall the video driver.
8. Check the Device Manager to determine that:
 - The device is properly installed. There are no red Xs or yellow exclamation marks.
 - There are no device conflicts.
 - No hardware is listed under Other Devices.
9. If the issue is still not resolved, see “Online Support Information” on page 155.
10. Run the Windows Memory Diagnostic from the operating system DVD and follow the onscreen prompts.
11. If the issue is still not resolved, see “Online Support Information” on page 155.

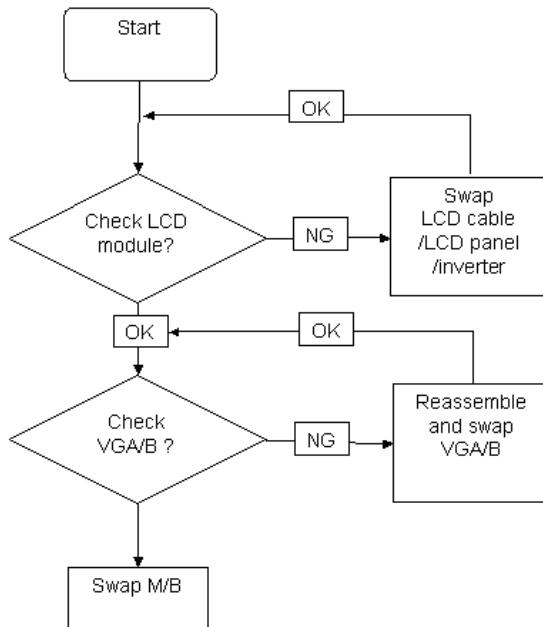
Random Loss of BIOS Settings

If the computer is experiencing intermittent loss of BIOS information, perform the following actions one at a time to correct the problem.

1. If the computer is more than one year old, replace the CMOS battery.
2. Run a complete virus scan using up-to-date software to ensure the computer is virus free.
3. If the computer is experiencing HDD or ODD BIOS information loss, disconnect and reconnect the power and data cables between devices.
If the BIOS settings are still lost, replace the cables.
4. If HDD information is missing from the BIOS, the drive may be defective and should be replaced.
5. Replace the Motherboard.
6. If the issue is still not resolved, see “Online Support Information” on page 155.

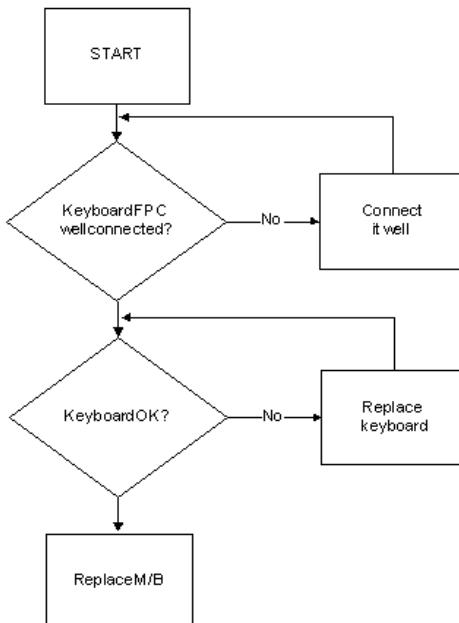
LCD Failure

If the **LCD** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



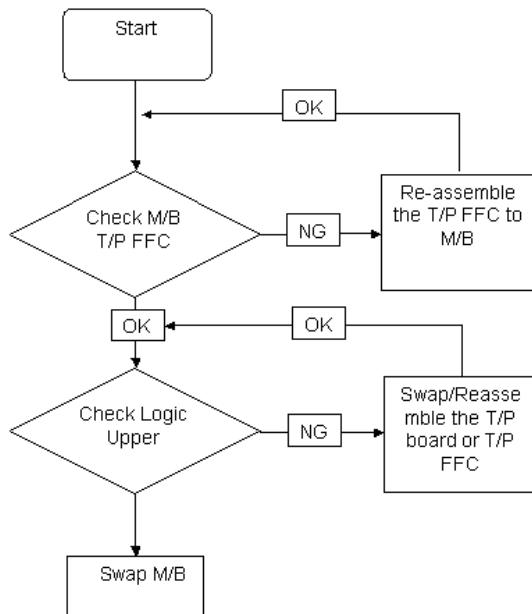
Built-In Keyboard Failure

If the built-in **Keyboard** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



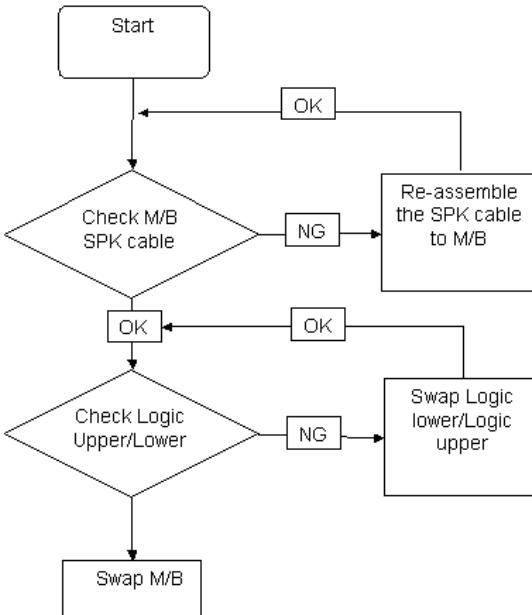
Touchpad Failure

If the **Touchpad** doesn't work, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



Internal Speaker Failure

If the internal **Speakers** fail, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



Sound Problems

If sound problems are experienced, perform the following actions one at a time to correct the problem.

1. Reboot the computer.
2. Navigate to **Start→Control Panel→System and Maintenance→System→Device Manager**. Check the Device Manager to determine that:
 - The device is properly installed.
 - There are no red Xs or yellow exclamation marks.
 - There are no device conflicts.
 - No hardware is listed under Other Devices.
3. Roll back the audio driver to the previous version, if updated recently.
4. Remove and reinstall the audio driver.
5. Ensure that all volume controls are set mid range:
 - a. Click the volume icon on the taskbar and drag the slider to 50. Ensure that the volume is not muted.
 - b. Click Mixer to verify that other audio applications are set to 50 and not muted.
6. Navigate to **Start→Control Panel→Hardware and Sound→Sound**. Ensure that Speakers are selected as the default audio device (green check mark).

NOTE: If Speakers does not show, right-click on the **Playback** tab and select **Show Disabled Devices** (clear by default).

7. Select Speakers and click **Configure** to start **Speaker Setup**. Follow the onscreen prompts to configure the speakers.
8. Remove and recently installed hardware or software.
9. Restore system and file settings from a known good date using **System Restore**.
If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
10. Reinstall the Operating System.
11. If the Issue is still not resolved, see “Online Support Information” on page 155.

Microphone Problems

If internal or external **Microphones** do not operate correctly, perform the following actions one at a time to correct the problem.

1. Check that the microphone is enabled. Navigate to **Start→Control Panel→Hardware and Sound→Sound** and select the **Recording** tab.
2. Right-click on the **Recording** tab and select **Show Disabled Devices** (clear by default).
3. The microphone appears on the **Recording** tab.
4. Right-click on the microphone and select **Enable**.
5. Select the microphone then click **Properties**. Select the **Levels** tab.
6. Increase the volume to the maximum setting and click **OK**.
7. Test the microphone hardware:
 - a. Select the microphone and click **Configure**.
 - b. Select **Set up microphone**.
 - c. Select the microphone type from the list and click **Next**.
 - d. Follow the onscreen prompts to complete the test.
8. If the Issue is still not resolved, see “Online Support Information” on page 155.

HDD Not Operating Correctly

If the **HDD** does not operate correctly, perform the following actions one at a time to correct the problem.

1. Disconnect all external devices.
2. Run a complete virus scan using up-to-date software to ensure the computer is virus free.
3. Run the Windows 7 Startup Repair Utility:
 - a. insert the Windows 7 Operating System DVD in the ODD and restart the computer.
 - b. When prompted, press any key to start to the operating system DVD.
 - c. The **Install Windows** screen displays. Click **Next**.
 - d. Select **Repair your computer**.
 - e. The **System Recovery Options** screen displays. Click **Next**.
 - f. Select the appropriate operating system, and click **Next**.

NOTE: Click **Load Drivers** if controller drives are required.

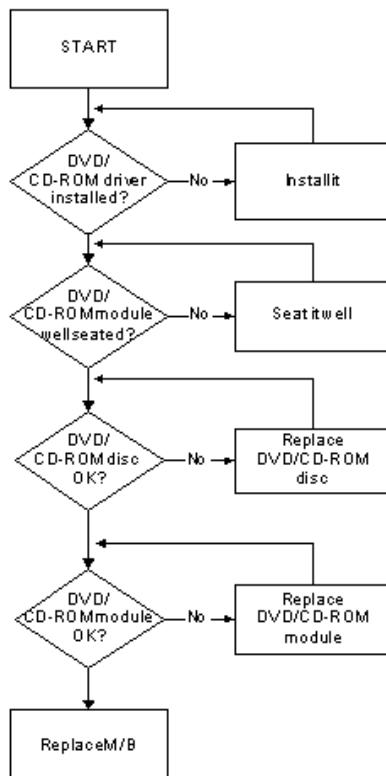
- g. Select **Startup Repair**.
- h. Startup Repair attempts to locate and resolve issues with the computer.
- i. When complete, click **Finish**.

If an issue is discovered, follow the onscreen information to resolve the problem.

4. Run the Windows Memory Diagnostic Tool. For more information see Windows Help and Support.
5. Restart the computer and press F2 to enter the BIOS Utility. Check the BIOS settings are correct and that CD/DVD drive is set as the first boot device on the Boot menu.
6. Ensure all cables and jumpers on the HDD and ODD are set correctly.
7. Remove any recently added hardware and associated software.
8. Run the Windows Disk Defragmenter. For more information see Windows Help and Support.
9. Run Windows Check Disk by entering **chkdsk /r** from a command prompt. For more information see Windows Help and Support.
10. Restore system and file settings from a known good date using **System Restore**.
If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
11. Replace the HDD. See “Main Unit Disassembly Process” on page 55.

ODD Failure

If the **ODD** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



ODD Not Operating Correctly

If the **ODD** exhibits any of the following symptoms it may be faulty:

- Audio CDs do not play when loaded
- DVDs do not play when loaded
- Blank discs do not burn correctly
- DVD or CD play breaks up or jumps
- Optical drive not found or not active:
 - Not shown in My Computer or the BIOS setup
 - LED does not flash when the computer starts up
 - The tray does not eject
- Access failure screen displays
- The ODD is noisy

Perform the following general solutions one at a time to correct the problem.

1. Reboot the computer and retry the operation.
2. Try an alternate disc.
3. Navigate to **Start→ Computer**. Check that the ODD device is displayed in the **Devices with Removable Storage** panel.
4. Navigate to **Start→ Control Panel→ System and Maintenance→ System→ Device Manager**.

- a. Double-click **IDE ATA/ATAPI controllers**. If a device displays a down arrow, right-click on the device and click **Enable**.
- b. Double-click **DVD/CD-ROM drives**. If the device displays a down arrow, right-click on the device and click **Enable**.
- c. Check that there are no yellow exclamation marks against the items in **IDE ATA/ATAPI controllers**. If a device has an exclamation mark, right-click on the device and uninstall and reinstall the driver.
- d. Check that there are no yellow exclamation marks against the items in **DVD/CD-ROM drives**. If a device has an exclamation mark, right-click on the device and uninstall and reinstall the driver.
- e. If the exclamation marker is not removed from the item in the lists, try removing any recently installed software and retrying the operation.

Discs Do Not Play

If discs do not play when inserted in the drive, perform the following actions one at a time to correct the problem.

- 1. Check that the disc is correctly seated in the drive tray and that the label on the disc is visible.
- 2. Check that the media is clean and scratch free.
- 3. Try an alternate disc in the drive.
- 4. Ensure that **AutoPlay** is enabled:
 - a. Navigate to **Start**→**Control Panel**→**Hardware and Sound**→**AutoPlay**.
 - b. Select **Use AutoPlay for all media and devices**.
 - c. In the Audio CD and DVD Movie fields, select the desired player from the drop down menu.
- 5. Check that the Regional Code is correct for the selected media:

IMPORTANT: Region can only be changed a limited number of times. After Changes remaining reaches zero, the region cannot be changed even Windows is reinstalled or the drive is moved to another computer.

- a. Navigate to **Start**→**Control Panel**→**System and Maintenance**→**System**→**Device Manager**.
- b. Double-click **DVD/CD-ROM drives**.
- c. Right-click **DVD drive** and click **Properties**, then click the **DVD Region** tab.
- d. Select the region suitable for the media inserted in the drive.

Discs Do Not Burn Properly

If discs can not be burned, perform the following actions one at a time to correct the problem.

- 1. Ensure that the default drive is record enabled:
 - a. Navigate to **Start**→**Computer** and right-click the writable ODD icon. Click **Properties**.
 - b. Select the **Recording** tab. In the **Desktop disc recording** panel, select the writable ODD from the drop down list.
 - c. Click **OK**.
- 2. Ensure that the software used for burning discs is the factory default. If using different software, refer to the software's user manual.

Playback is Choppy

If playback is choppy or jumps, perform the following actions one at a time to correct the problem.

- 1. Check that system resources are not running low:
 - a. Try closing some applications.
 - b. Reboot and try the operation again.
- 2. Check that the ODD controller transfer mode is set to DMA:
 - a. Navigate to **Start**→**Control Panel**→**System and Maintenance**→**System**→**Device Manager**.

- b. Double-click **IDE ATA/ATAPI controllers**, then right-click ATA Device 0.
 - c. Click **Properties** and select the **Advanced Settings** tab. Ensure that the **Enable DMA** box is checked and click **OK**.
 - d. Repeat for the other ATA Devices shown if applicable.

Drive Not Detected

If Windows cannot detect the drive, perform the following actions one at a time to correct the problem.

- 1. Restart the computer and press F2 to enter the BIOS Utility.
- 2. Check that the drive is detected in the **ATAPI Model Name** field on the Information page.
NOTE: Check that the entry is identical to one of the ODDs specified in "Hardware Specifications and Configurations" on page 16.
- 3. Turn off the power and remove the cover to inspect the connections to the ODD. See "Disassembly Process" on page 47.
 - a. Check for broken connectors on the drive, motherboard, and cables.
 - b. Check for bent or broken pins on the drive, motherboard, and cable connections.
 - c. Try an alternate cable, if available. If the drive works with the new cable, the original cable should be replaced.
- 4. Reseat the drive ensuring and all cables are connected correctly.
- 5. Replace the ODD. See "Disassembly Process" on page 47.

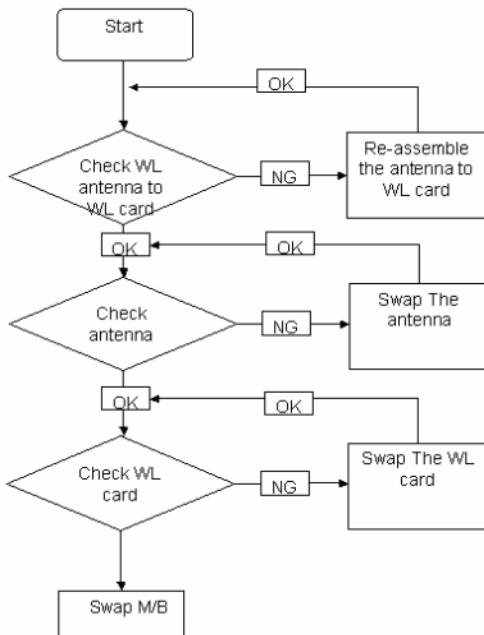
Drive Read Failure

If discs cannot be read when inserted in the drive, perform the following actions one at a time to correct the problem.

- 1. Remove and clean the failed disc.
- 2. Retry reading the CD or DVD.
 - d. Test the drive using other discs.
 - e. Play a DVD movie
 - f. Listen to a music CD
- If the ODD works properly with alternate discs, the original disc is probably defective and should be replaced.
- 3. Turn off the power and remove the cover to inspect the connections to the ODD. See "Disassembly Process" on page 47.
 - a. Check for broken connectors on the drive, motherboard, and cables.
 - b. Check for bent or broken pins on the drive, motherboard, and cable connections.
 - c. Try an alternate cable, if available. If the drive works with the new cable, the original cable should be replaced.
- 4. Replace the ODD. See "Disassembly Process" on page 47.

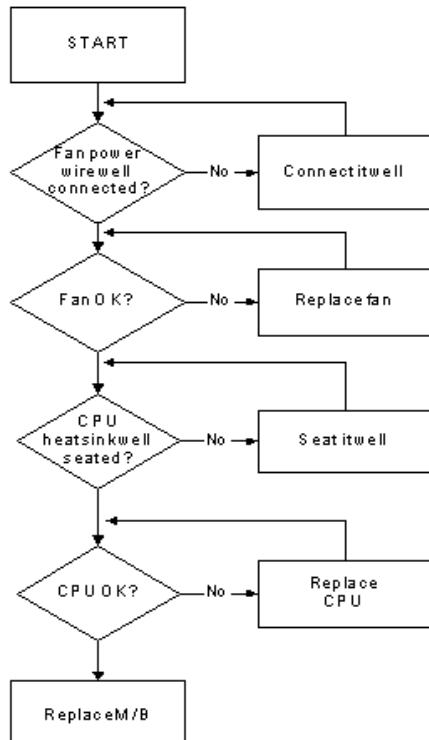
Wireless Function Failure

If the **WLAN** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



Thermal Unit Failure

If the **Thermal Unit** fails, perform the following actions one at a time to correct the problem. Do not replace a non-defective FRUs:



External Mouse Failure

If an external **Mouse** fails, perform the following actions one at a time to correct the problem.

1. Try an alternative mouse.
2. If the mouse uses a wireless connection, insert new batteries and confirm there is a good connection. See the mouse user manual.
3. If the mouse uses a USB connection, try an alternate USB port.
4. Try an alternative program to verify mouse operation. Reinstall the program experiencing mouse failure.
5. Restart the computer.
6. Remove any recently added hardware and associated software.
7. Remove any recently added software and reboot.
8. Restore system and file settings from a known good date using **System Restore**.
If the issue is not fixed, repeat the preceding steps and select an earlier time and date.
9. Run the Event Viewer to check the events log for errors. For more information see Windows Help and Support.
10. Roll back the mouse driver to the previous version if updated recently.
11. Remove and reinstall the mouse driver.
12. Check the Device Manager to determine that:
 - The device is properly installed. There are no red Xs or yellow exclamation marks.
 - There are no device conflicts.
 - No hardware is listed under Other Devices.
13. If the Issue is still not resolved, see “Online Support Information” on page 155.

Other Failures

If the CRT Switch, Dock, LAN Port, external MIC or Speakers, PCI Express Card, 5-in-1 Card Reader or Volume Wheel fail, perform the following general steps to correct the problem. Do not replace a non-defective FRUs:

1. Check Drive whether is OK.
2. Check Test Fixture is ok.
3. Swap M/B to Try.

Intermittent Problems

Intermittent system hang problems can be caused by a variety of reasons that have nothing to do with a hardware defect, such as: cosmic radiation, electrostatic discharge, or software errors. FRU replacement should be considered only when a recurring problem exists.

When analyzing an intermittent problem, do the following:

1. Run the advanced diagnostic test for the system board in loop mode at least 10 times.
2. If no error is detected, do not replace any FRU.
3. If any error is detected, replace the FRU. Rerun the test to verify that there are no more errors.

Undetermined Problems

The diagnostic problems does not identify which adapter or device failed, which installed devices are incorrect, whether a short circuit is suspected, or whether the system is inoperative.

Follow these procedures to isolate the failing FRU (do not isolate non-defective FRU).

NOTE: Verify that all attached devices are supported by the computer.

NOTE: Verify that the power supply being used at the time of the failure is operating correctly. (See "Power On Issue" on page 112.):

1. Power-off the computer.
2. Visually check them for damage. If any problems are found, replace the FRU.
3. Remove or disconnect all of the following devices:
 - Non-Acer devices
 - Printer, mouse, and other external devices
 - Battery pack
 - Hard disk drive
 - DIMM
 - CD-ROM/Diskette drive Module
 - PC Cards
4. Power-on the computer.
5. Determine if the problem has changed.
6. If the problem does not recur, reconnect the removed devices one at a time until you find the failing FRU.
7. If the problem remains, replace the following FRU one at a time. Do not replace a non-defective FRU:
 - System board
 - LCD assembly

Post Codes

These tables describe the POST codes and descriptions during the POST.

Post Code Range

Phase	POST Code Range
SEC	0x01 - 0x0F
PEI	0x70 - 0x9F
DXE	0x40 - 0x6F
BDS	0x10 - 0x3F
SMM	0xA0 - 0xBF
S3	0xC0 - 0xCF
ASL	0x51 – 0x55
	0xE1 – 0xE4
PostBDS	0xF9 – 0xFE
InsydeH2ODDT™ Reserve	0xD0 – 0xD7
OEM Reserve	0xE8 – 0xEB
Reserved	0xD8 – 0xE0
	0xE5 – 0xE7
	0xEC – 0xF8

SEC Phase POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
SEC_SYSTEM_POWER_ON	SEC	1	CPU power on and switch to Protected mode
SEC_BEFORE_MICROCODE_PATCH	SEC	2	Patching CPU microcode
SEC_AFTER_MICROCODE_PATCH	SEC	3	Setup Cache as RAM
SEC_ACCESS_CSR	SEC	4	PCIE MMIO Base Address initial
SEC_GENERIC_MSRRINIT	SEC	5	CPU Generic MSR initialization
SEC_CPU_SPEEDCFG	SEC	6	Setup CPU speed
SEC_SETUP_CAR_OK	SEC	7	Cache as RAM test
SEC_FORCE_MAX_RATIO	SEC	8	Tune CPU frequency ratio to maximum level
SEC_GO_TO_SECSTARTUP	SEC	9	Setup BIOS ROM cache
SEC_GO_TO_PEICORE	SEC	0A	Enter Boot Firmware Volume

PEI Phase POST Code Table:

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
PEI_SIO_INIT	PEI	70	Super I/O Initialization
PEI_CPU_REG_INIT	PEI	71	CPU Early Initialization
PEI_PCIE_MMIO_INIT	PEI	74	PCIE MMIO BAR Initialization
PEI_NB_REG_INIT	PEI	75	North Bridge Early Initialization
PEI_SB_REG_INIT	PEI	76	South Bridge Early Initialization
PEI TPM_INIT	PEI	78	TPM Initialization
PEI SMBUS_INIT	PEI	79	SMBUS Early Initialization

Functionality Name (Include\\PostCode.h)	Phase	PostCode	Description
PEI_PROGRAM_CLOCK_GEN	PEI	7A	Clock Generator Initialization
PEI_IGD_EARLY_INITIAL	PEI	7B	Internal Graphic device early Initialization
PEI_HECI_INIT	PEI	7C	HECI Initialization
PEI_WATCHDOG_INIT	PEI	7D	Watchdog timer Initialization
PEI_MEMORY_INIT	PEI	7E	Memory Initial for Normal boot.
PEI_MEMORY_INIT_FOR_CRISIS	PEI	7F	Memory Initial for Crisis Recovery
PEI_MEMORY_INSTALL	PEI	80	Simple Memory test
PEI_TXTPEI	PEI	81	TXT function early Initialization
PEI_SWITCH_STACK	PEI	82	Start to use Memory
PEI_MEMORY_CALLBACK	PEI	83	Set cache for physical memory
PEI_ENTER_RECOVERY_MODE	PEI	84	Recovery device Initialization
PEI_RECOVERY_MEDIA_FOUND	PEI	85	Found Recovery image
PEI_RECOVERY_MEDIA_NOT_FOUND	PEI	86	Recovery image not found
PEI_RECOVERY_LOAD_FILE_DONE	PEI	87	Load Recovery Image completed
PEI_RECOVERY_START_FLASH	PEI	88	Start Flash BIOS with Recovery image
PEI_ENTER_DXEIPL	PEI	89	Loading BIOS image to RAM
PEI_FINDING_DXE_CORE	PEI	8A	Loading DXE core
PEI_GO_TO_DXE_CORE	PEI	8B	Enter DXE core

DXE Phase POST Code Table:

Functionality Name (Include\\PostCode.h)	Phase	PostCode	Description
DXE_TCGDXE	DXE	40	TPM initial in DXE
DXE_SB_SPI_INIT	DXE	41	South bridge SPI initialization
DXE_CF9_RESET	DXE	42	Setup Reset service
DXE_SB_SERIAL_GPIO_INIT	DXE	43	South bridge Serial GPIO initialization
DXE_SMMACCESS	DXE	44	Setup SMM ACCE SS service
DXE_SIO_INIT	DXE	46	Super I/O DXE initialization
DXE_LEGACY_REGION	DXE	47	Setup Legacy Region service
DXE_IDENTIFY_FLASH_DEVICE	DXE	49	Identify Flash device
DXE_FTW_INIT	DXE	4A	Fault Tolerant Write verification
DXE_VARIABLE_INIT	DXE	4B	Variable Service initialization
DXE_VARIABLE_INIT_FAIL	DXE	4C	Fail to initial Variable Service
DXE_MTC_INIT	DXE	4D	MTC Initial
DXE_CPU_INIT	DXE	4E	CPU Middle Initialization
DXE_MP_CPU_INIT	DXE	4F	Multi-processor MiddleInitialization
DXE_SMBUS_INIT	DXE	50	SMBUS Driver Initialization
DXE_SMART_TIMER_INIT	DXE	51	8259 Initialization
DXE_PCRRTC_INIT	DXE	52	RTC Initialization
DXE_SATA_INIT	DXE	53	SATA Controller earlyInitialization

Functionality Name (Include\\PostCode.h)	Phase	PostCode	Description
DXE_SMM_CONTROLLER_INIT	DXE	54	Setup SMM Control service
DXE_LEGACY_INTERRUPT	DXE	55	Setup Legacy Interrupt service
DXE_RELOCATE_SMBASE	DXE	56	Relocate SMM BASE
DXE_FIRST_SMI	DXE	57	SMI test
DXE_VTD_INIT	DXE	58	VTD Initial
DXE_BEFORE_CSM16_INIT	DXE	59	Legacy BIOS Initialization
DXE_AFTER_CSM16_INIT	DXE	5A	Legacy interrupt function Initialization
DXE_LOAD_ACPI_TABLE	DXE	5B	ACPI Table Initialization
DXE_SB_DISPATCH	DXE	5C	Setup SB SMM Dispatcher service
DXE_SB_IOTRAP_INIT	DXE	5D	Setup SB IOTRAP Service
DXE_SUBCLASS_DRIVER	DXE	5E	Build AMT Table
DXE_PPM_INIT	DXE	5F	PPM Initialization
DXE_HECIDRV_INIT	DXE	60	HECIDRV Initialization

BDS Phase POST Code Table:

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
BDS_ENTER_BDS	BDS	10	Enter BDS entry
BDS_INSTALL_HOTKEY	BDS	11	Install Hotkey service
BDS ASF_INIT	BDS	12	ASF Initialization
BDS_PCI_ENUMERATION_START	BDS	13	PCI enumeration
BDS BEFORE PCIIO INSTALL	BDS	14	PCI resource assign complete
BDS_PCI_ENUMERATION_END	BDS	15	PCI enumeration complete
BDS_CONNECT_CONSOLE_IN	BDS	16	Keyboard Controller, Keyboard and Mouse initialization
BDS_CONNECT_CONSOLE_OUT	BDS	17	Video device initialization
BDS_CONNECT_STD_ERR	BDS	18	Error report device initialization
BDS_CONNECT_USB_HC	BDS	19	USB host controller initialization
BDS_CONNECT_USB_BUS	BDS	1A	USB BUS driver initialization
BDS_CONNECT_USB_DEVICE	BDS	1B	USB device driver initialization
BDS_NO_CONSOLE_ACTION	BDS	1C	Console device initial fail
BDS_DISPLAY_LOGO_SYSTEM_INFO	BDS	1D	Display logo or system information
BDS_START_IDE_CONTROLLER	BDS	1E	IDE controller initialization
BDS_START_SATA_CONTROLLER	BDS	1F	SATA controller initialization
BDS_START_ISA_ACPI_CONTROLLER	BDS	20	SIO controller initialization
BDS_START_ISA_BUS	BDS	21	ISA BUS driver initialization
BDS_START_ISA_FDD	BDS	22	Floppy device initialization
BDS_START_ISA_SEIRAL	BDS	23	Serial device initialization
BDS_START_IDE_BUS	BDS	24	IDE device initialization
BDS_START_AHCI_BUS	BDS	25	AHCI device initialization
BDS_CONNECT_LEGACY_ROM	BDS	26	Dispatch option ROMs
BDS ENUMERATE_ALL_BOOT_OPTION	BDS	27	Get boot device information

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
BDS_END_OF_BOOT_SELECTION	BDS	28	End of boot selection
BDS_ENTER_SETUP	BDS	29	Enter Setup Menu
BDS_ENTER_BOOT_MANAGER	BDS	2A	Enter Boot manager
BDS_BOOT_DEVICE_SELECT	BDS	2B	Try to boot system to OS
BDS_EFI64_SHADOW_ALL_LEGACY_RO M	BDS	2C	Shadow Misc Option ROM
BDS_ACPI_S3SAVE	BDS	2D	Save S3 resume required data in RAM
BDS_READY_TO_BOOT_EVENT	BDS	2E	Last Chipset initial before boot to OS
BDS_GO_LEGACY_BOOT	BDS	2F	Start to boot Legacy OS
BDS_GO_UEFI_BOOT	BDS	30	Start to boot UEFI OS
BDS_LEGACY16_PREPARE_TO_BOOT	BDS	31	Prepare to Boot to Legacy OS
BDS_EXIT_BOOT_SERVICES	BDS	32	Send END of POST Message to ME via HECI
BDS_LEGACY_BOOT_EVENT	BDS	33	Last Chipset initial before boot to Legacy OS.
BDS_ENTER_LEGACY_16_BOOT	BDS	34	Ready to Boot Legacy OS.
BDS_RECOVERY_START_FLASH	BDS	35	Fast Recovery Start Flash.

PostBDS POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
POST_BDS_NO_BOOT_DEVICE	POST_BDS	F9	No Boot Device
POST_BDS_START_IMAGE	POST_BDS	FB	UEFI Boot Start Image
POST_BDS_ENTER_INT19	POST_BDS	FD	Legacy 16 boot entry
POST_BDS_JUMP_BOOT_SECTOR	POST_BDS	FE	Try to Boot with INT 19

S3 Functions POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
POST_BDS_NO_BOOT_DEVICE	POST_BDS	F9	No Boot Device
POST_BDS_START_IMAGE	POST_BDS	FB	UEFI Boot Start Image
POST_BDS_ENTER_INT19	POST_BDS	FD	Legacy 16 boot entry
POST_BDS_JUMP_BOOT_SECTOR	POST_BDS	FE	Try to Boot with INT 19

ACPI Functions POST Code Table

Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
ASL_ENTER_S1	ASL	51	Prepare to enter S1
ASL_ENTER_S3	ASL	53	Prepare to enter S3
ASL_ENTER_S4	ASL	54	Prepare to enter S4
ASL_ENTER_S5	ASL	55	Prepare to enter S5
ASL_WAKEUP_S1	ASL	E1	System wakeup from S1
ASL_WAKEUP_S3	ASL	E3	System wakeup from S3
ASL_WAKEUP_S4	ASL	E4	System wakeup from S4

SMM Functions POST Code Table

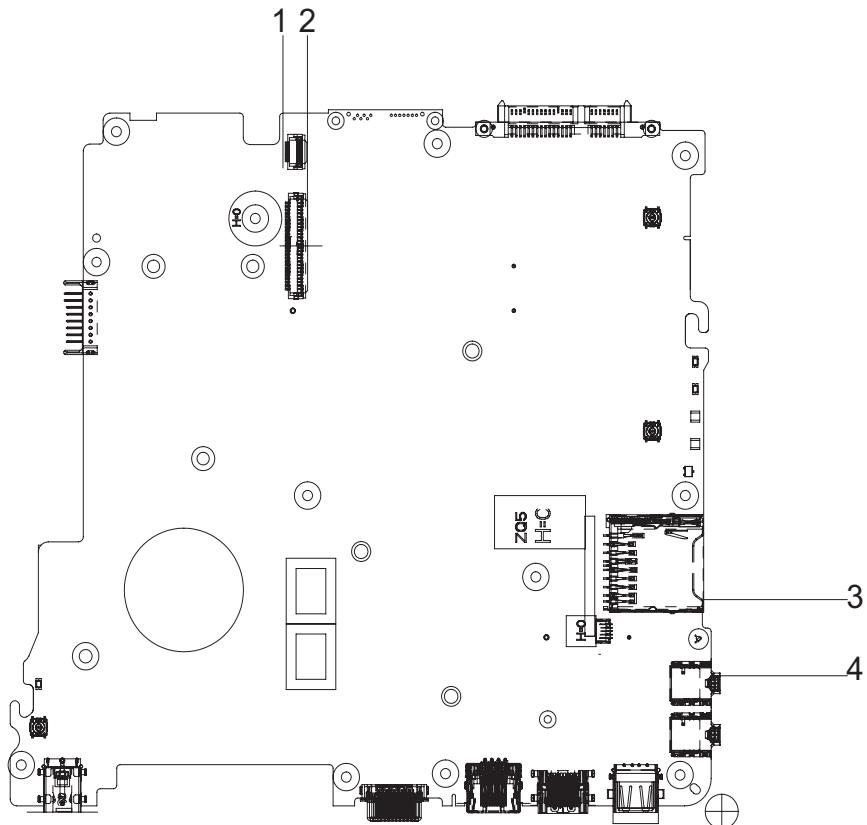
Functionality Name (Include\\PostCode.h)	Phase	Post Code	Description
SMM_IDENTIFY_FLASH_DEVICE	SMM	0xA0	Identify Flash device in SMM
SMM_SMM_PLATFORM_INIT	SMM	0xA2	SMM service initial
SMM_ACPI_ENABLE_START	SMM	0xA6	OS call ACPI enable function
SMM_ACPI_ENABLE_END	SMM	0xA7	ACPI enable function complete
SMM_S1_SLEEP_CALLBACK	SMM	0xA1	Enter S1
SMM_S3_SLEEP_CALLBACK	SMM	0xA3	Enter S3
SMM_S4_SLEEP_CALLBACK	SMM	0xA4	Enter S4
SMM_S5_SLEEP_CALLBACK	SMM	0xA5	Enter S5
SMM_ACPI_DISABLE_START	SMM	0xA8	OS call ACPI disable function
SMM_ACPI_DISABLE_END	SMM	0xA9	ACPI disable function complete

InsydeH2ODDT Debugger POST Code Table

Functionality Name (Include\\PostCode.h)	PostCode	Description
Used by Insyde debugger	0x0D	Waiting for device connect
Used by Insyde debugger	0xD0	Waiting for device connect
Used by Insyde debugger	0xD1	InsydeH2ODDT Ready
Used by Insyde debugger	0xD2	EHCI not found
Used by Insyde debugger	0xD3	Debug port connect low speed device
Used by Insyde debugger	0xD4	DDT Cable become low speed device
Used by Insyde debugger	0xD5	DDT Cable Transmission Error (Get descriptor fail)
Used by Insyde debugger	0xD6	DDT Cable Transmission Error (Set Debug mode fail)
Used by Insyde debugger	0xD7	DDT Cable Transmission Error (Set address fail)

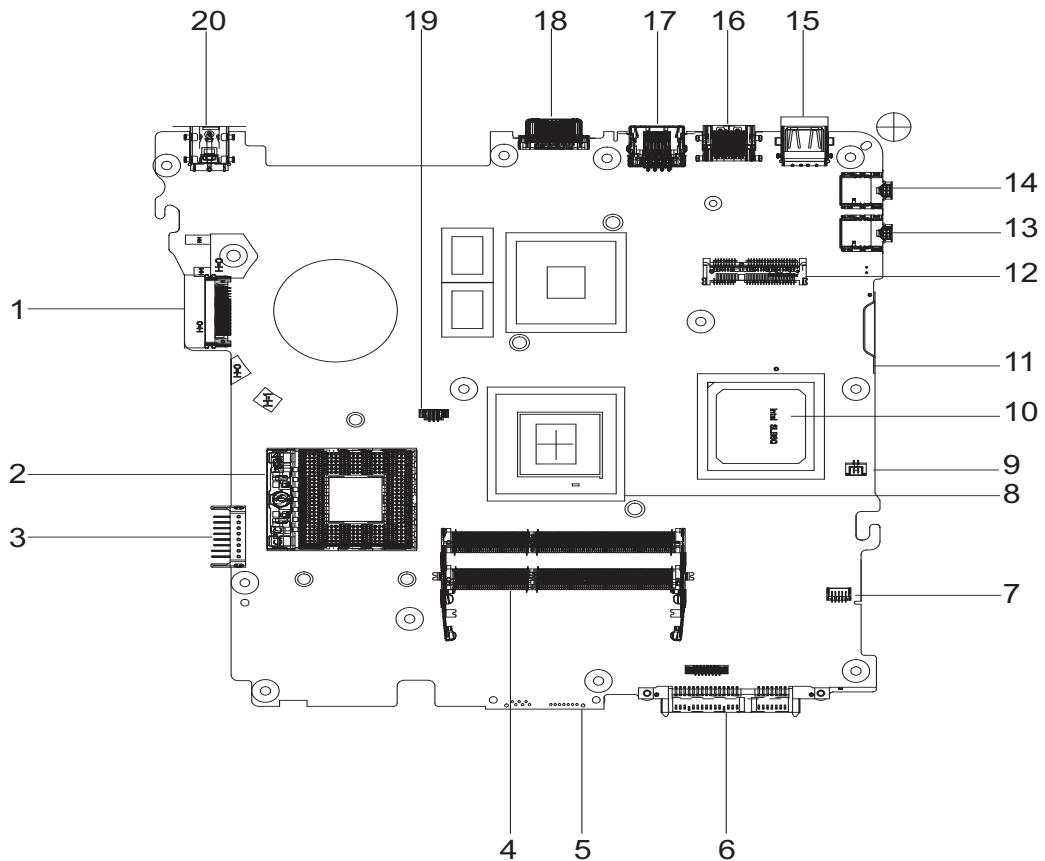
Jumper and Connector Locations

Top View



Item	Description	Item	Description
1	CN4 Touchpad	3	CN2 Cardreader
2	CN3 Keyboard	4	CN1 Int Mic

Bottom View

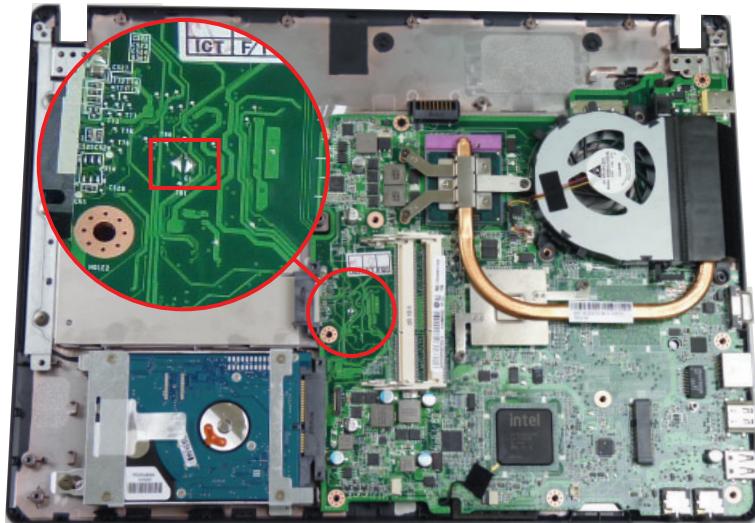


Item	Description	Item	Description
1	CN14 LVDS	11	CN13 RTC
2	CPU	12	CN15 WLAN
3	PJ1 Battery	13	CN16 Line out
4	CN9/CN10 DDR3	14	CN17 Mic Ext
5	CN5 SATA HDD	15	CN18 USB
6	CN6 SATA HDD	16	CN21 HDMI
7	CN8 BT	17	CN19 LAN
8	NB	18	CRT CN20
9	CN11 SPK	19	CN12 Fan
10	SB	20	PJ2 DC Jack

Clearing Password Check and BIOS Recovery

This section provide you the standard operating procedures of clearing password and BIOS recovery for Acer Aspire 4333/4733Z. Acer provides one Hardware Open Gap on the mainboard for clearing password check, and one Hotkey for enabling BIOS Recovery.

Hardware Open Gap Description is as follows:



Item	Description	Location
G2 / G3	CMOS Jumper	DIMM bay

Steps for Clearing BIOS Password Check

If users set BIOS Password (Supervisor Password and/or User Password) for a security reason, BIOS will ask the password during systems POST or when systems enter to BIOS Setup menu. However, once it is necessary to bypass the password check, users need to short the HW Gap to clear the password by the following steps:

1. Power Off the system, and remove HDD, AC, Battery and DIMMs from the machine.
2. Open the Bottom Cover of the machine and locate the G2 and G3 jumpers.
3. Use an electric conductivity tool to short the two points of the HW Gap.
4. Plug in AC, keep the short condition on the HW Gap, and press Power Button to power on the system until BIOS POST is finished. Then remove the tool from the HW Gap.
5. Restart system. Press **F2** key to enter BIOS Setup menu.
6. If there is no Password request, BIOS Password is cleared. Otherwise, please follow the steps and try again.

NOTE: These steps are only for clearing BIOS Password (Supervisor Password and User Password).

BIOS Recovery by Crisis Disk

BIOS Recovery Boot Block:

BIOS Recovery Boot Block is a special block of BIOS. It is used to boot up the system with minimum BIOS initialization. Users can enable this feature to restore the BIOS firmware to a successful one once the previous BIOS flashing process failed.

BIOS Recovery Hotkey:

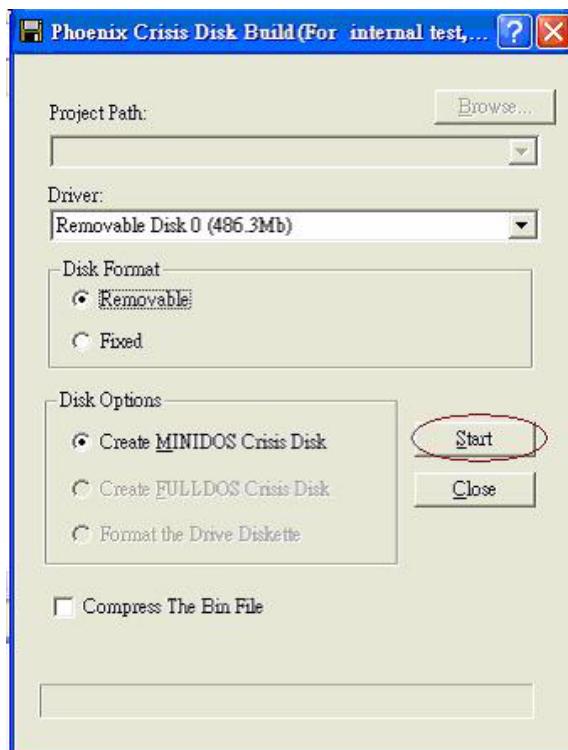
The system provides a function hotkey: **Fn+Esc**, to enable the BIOS Recovery process when the system is powered on during BIOS POST. To use this function, it is strongly recommended to have the AC adapter and Battery present. If this function is enabled, the system will force the BIOS to enter a special BIOS block, called Boot Block.

Steps for BIOS Recovery from USB Storage:

Before doing this, prepare the Crisis USB key. The Crisis USB key could be made by executing the Crisis Disk program in another system with Windows 7 OS.

Follow the steps below:

1. Insert a USB stick/floppy.
2. Execute WINCRIS.exe and click **Start** to create the crisis disk.



3. Plug USB storage into USB port of the system that needs to be rescued.
4. Press **Fn + ESC** and the power button to power on the system.
5. The system will go into crisis mode and recover BIOS.

FRU (Field Replaceable Unit) List

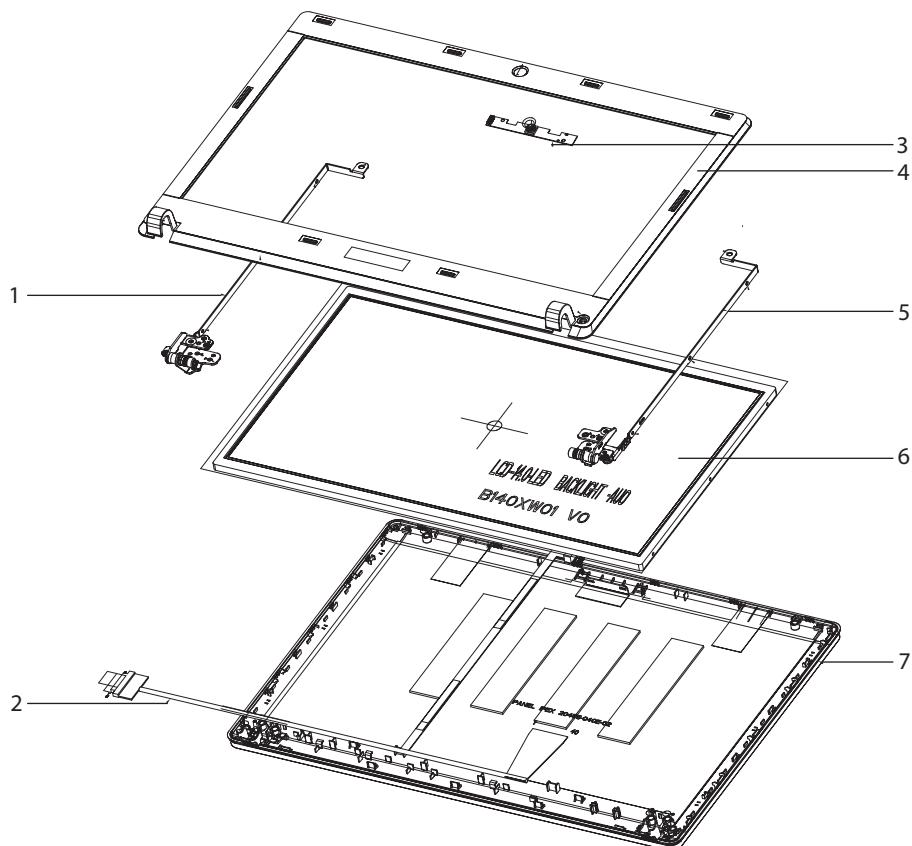
This chapter gives you the FRU (Field Replaceable Unit) listing in global configurations of Acer Aspire 4333/4733Z. Refer to this chapter whenever ordering for parts to repair or for RMA (Return Merchandise Authorization).

Please note that WHEN ORDERING FRU PARTS, you should check the most up-to-date information available on your regional web or channel. For whatever reasons a part number change is made, it will not be noted on the printed Service Guide. For ACER AUTHORIZED SERVICE PROVIDERS, your Acer office may have a DIFFERENT part number code from those given in the FRU list of this printed Service Guide. You MUST use the local FRU list provided by your regional Acer office to order FRU parts for repair and service of customer machines.

NOTE: To scrap or to return the defective parts, you should follow the local government ordinance or regulations on how to dispose it properly, or follow the rules set by your regional Acer office on how to return it.

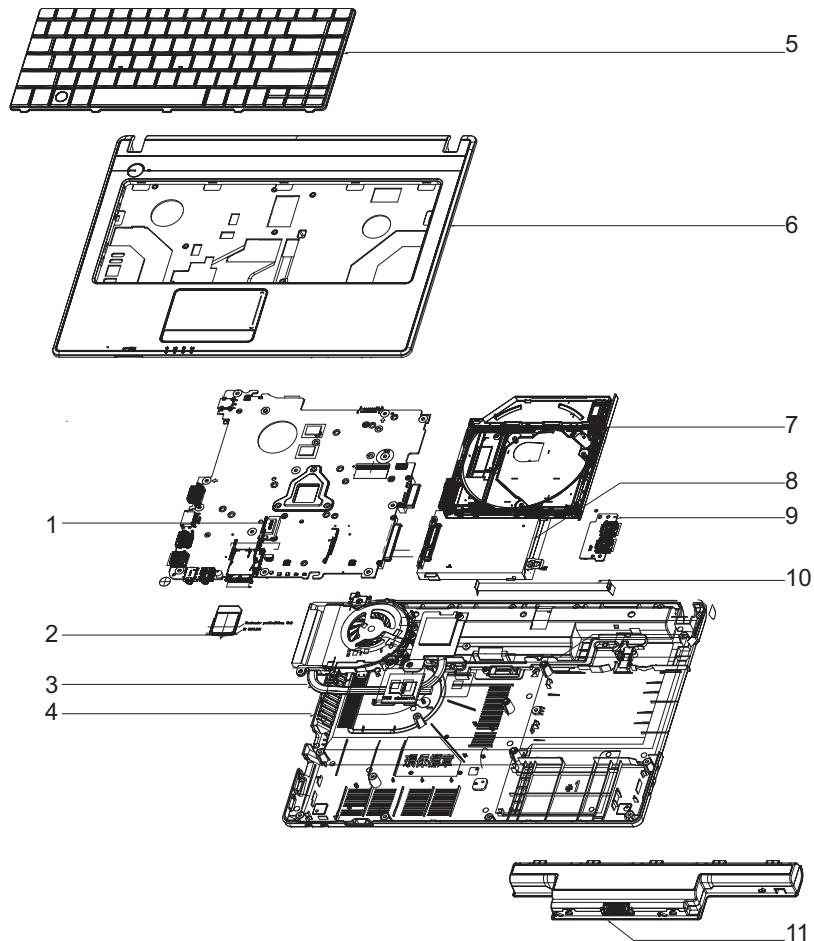
Acer Aspire 4333/4733Z Exploded Diagrams

LCD Assembly



No.	Description	Acer P/N
1	Left hinge	33.R6Z07.004
2	LVDS cable assy	50.R6Z07.004
3	Camera	AM.21400.067
4	LCD bezel	60.NBG07.004
5	Right hinge	33.R6Z07.005
6	LCD Panel	LK.14008.004
7	LCD cover	60.NBG07.003

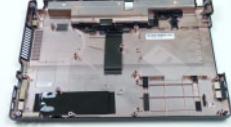
Chassis Assembly



No.	Description	Acer P/N	No.	Description	Acer P/N
1	Bluetooth module	BH.21100.008	7	ODD	6M.R6Z07.001
2	Dummy card	42.PSR07.002	8	HDD	KH.16001.045
3	Thermal module	60.R6Z07.013	9	USB board	55.R6Z07.001
4	Base assy	60.R6Z07.007	10	USB FFC	50.R6Z07.001
5	Keyboard	KB.I140A.204	11	Battery	BT.00603.111
6	Upper cover	60.R6Z07.001			

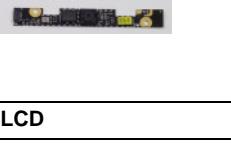
Acer Aspire 4333/4733Z FRU List

Category	Description	P/N
ADAPTER		
	Adapter DELTA 65W 19V 1.7x5.5x11 Yellow ADP-65JH DB A, LV5 LED LF	AP.06501.026
	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-22AC LV5 LED LF	AP.06503.024
	Adapter HIPRO 65W 19V 1.7x5.5x11 Yellow HP-A0652R3B 1LF, LV5 LED LF	AP.0650A.012
	Adapter DELTA 65W 19V 1.7x5.5x11 Yellow ADP-65VH BA, LV5, Low profile LED LF	AP.06501.033
	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-69AW, LV5, Low profile LED LF	AP.06503.029
	Adapter Chicony Power 65W 19V 1.7x5.5x11 Yellow CPA09-A065N1, LV5, low profile LED LF	AP.0650A.017
BATTERY		
	Battery SANYO AS10D Li-Ion 3S2P SANYO 6 cell 4400mAh Main COMMON ID:AS10D31	BT.00603.111
	Battery SONY AS10D Li-Ion 3S2P SONY 6 cell 4400mAh Main COMMON ID:AS10D41	BT.00604.049
	Battery PANASONIC AS10D Li-Ion 3S2P PANASONIC 6 cell 4400mAh Main COMMON ID:AS10D51	BT.00605.062
	Battery SIMPLIO AS10D Li-Ion 3S2P PANASONIC 6 cell 4400mAh Main COMMON ID:AS10D71	BT.00607.125
	Battery SIMPLIO AS10D Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON ID:AS10D73	BT.00607.126
	Battery SIMPLIO AS10D Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D	BT.00607.127
BOARD		
	Foxconn Wireless LAN Atheros HB95BG (HM) T77H121.10	NI.23600.077
	Liteon Wireless LAN Atheris HB97 2x2 BGN (HM) WN6603AH	NI.23600.073
	Foxconn Wireless LAN Atheros HB97 2x2 BGN (HM)	NI.23600.072
	Foxconn Wireless LAN Broadcomm 43225 2x2 BGN (HM) T77H103.00	NI.23600.066
	Foxconn Bluetooth BRM 2046 BT3.0 (T60H928.33) f/w:861	BH.21100.008
	Foxconn Bluetooth ATH AR3011 (BT3.0)	BH.21100.009
	Foxconn Bluetooth BRM 2070 (T77H114.01) BT 3.0	BH.21100.010
	Foxconn Bluetooth BRM 2070 (T77H114.01)	BH.21100.007
	USB BOARD	55.R6Z07.001
CABLE		
	POWER CORD US 3PIN ROHS	27.TAXV7.001
	PWR CORD(ISR)1.8M 3PBLK FZ0l0008-038	27.TATV7.005
	PWR CORD V50CB3T3012180QD TW-110V,3P	27.A99V7.002
	POWER CORD(SWI)1.8M 3PBLACK FZ010008-011	27.A99V7.004
	POWER CORD(IT) 1.8M 3PBLACK FZ010008-008	27.A99V7.005
	POWER CORD(S.A) 1.8M 3BLACK FZ010008-006	27.T48V7.001
	POWER CORD(EU) 1.8M 3PBLACK FM010008-010	27.TATV7.001
	POWER CORD BRAZIL IMETRO 3 PIN	27.S0607.001
	PWR CORD V943B30001218008 DANISH 3P	27.A03V7.006

Category	Description	P/N
	BLUETOOTH CABLE (6P FOR BT3.0 BRM2070)	50.TVM07.002
	BLUETOOTH CABLE	50.PSR07.001
	FFC- USB	50.R6Z07.001
CASE/COVER/BRACKET ASSEMBLY		
	UPPER CASE W/ SPK,TP, TP FFC - BLACK	60.R6Z07.001
	UPPER CASE W/O SPK,TP,TP FFC - BLACK	60.R6Z07.004
	TOUCH PAD	56.R6Z07.001
	FFC- TP TO MB	50.R6Z07.003
	UPPER CASE W/ SPK,TP, TP FFC - BROWN	60.R6Z07.002
	UPPER CASE W/O SPK,TP,TP FFC - BROWN	60.R6Z07.005
	TOUCH PAD	56.R6Z07.001
	FFC- TP TO MB	50.R6Z07.003
	UPPER CASE W/ SPK,TP, TP FFC - RED	60.R6Z07.003
	UPPER CASE W/O SPK,TP,TP FFC - RED	60.R6Z07.006
	TOUCH PAD	56.R6Z07.001
	FFC- TP TO MB	50.R6Z07.003
	LOWER CASE	60.R6Z07.007
	HINGE SUPPORT BRACKET FOR UPPER CASE	33.R6Z07.001
	DUMMY CARD	42.PSR07.002
CPU/PROCESSOR		
	CPU Intel Celeron 900 PGA 2.2G 1M 800 35W	KC.N0001.900
	CPU Intel Celeron T3500 PGA 2.1G 1M 800 35W	KC.35001.CMT
DVD RW DRIVE		
	DVD/RW SUPER MULTI SATA MODULE	6M.R6Z07.001
	ODD TOSHIBA Super-Multi DRIVE 12.7mm Tray DL 8X TS-L633F LF W/O bezel SATA (HF + Windows 7)	KU.00801.040
	ODD HLDS Super-Multi DRIVE 12.7mm Tray DL 8X GT32N (R5-2) LF W/O bezel SATA with Renesas solution + PCC LD (HF + Windows 7)	KU.0080D.055
	ODD PLDS Super-Multi DRIVE 12.7mm Tray DL 8X DS-8A5SH LF+HF W/O bezel SATA With TI + Rohm Solution (HF + Windows 7)	KU.0080F.014
	ODD SONY Super-Multi DRIVE 12.7mm Tray DL 8X AD-7585H LF W/O bezel SATA (HF + Windows 7)	KU.0080E.027
	ODD BEZEL - SUPER MULTI	60.R6Z07.008
	ODD BRACKET	33.PUM07.001

Category	Description	P/N
HDD/HARD DISK DRIVE		
	HDD SEAGATE 2.5" 5400rpm 160GB ST9160314AS,9HH13C-189, Seagate(new pcb) SATA 8MB LF F/W:0001SDM1	KH.16001.045
	HDD HGST 2.5" 5400rpm 160GB HTS545016B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.16007.026
	HDD TOSHIBA 2.5" 5400rpm 160GB MK1665GSX, Capricorn BS, 320G/P SATA 8MB LF F/W:GJ001J	KH.16004.008
	HDD WD 2.5" 5400rpm 160GB WD1600BEVT-22A23T0 , WD, ML320S SATA 8MB LF F/W:01.01A01	KH.16008.027
	HDD TOSHIBA 2.5" 5400rpm 250GB MK2565GSX, Capricorn BS, 320G/P SATA 8MB LF F/W:GJ001J	KH.25004.005
	HDD HGST 2.5" 5400rpm 250GB HTS545025B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.25007.016
	HDD SEAGATE 2.5" 5400rpm 250GB ST9250315AS, 9HH132-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.25001.019
	HDD WD 2.5" 5400rpm 250GB WD2500BEVT-22A23T0, WD, ML320S SATA 8MB LF F/W:01.01A01.	KH.25008.025
	HDD TOSHIBA 2.5" 5400rpm 320GB Capricorn BS ,MK3265GSX SATA 8MB LF F/W:GJ001J	KH.32004.004
	HDD HGST 2.5" 5400rpm 320GB HTS545032B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.32007.008
	HDD WD 2.5" 5400rpm 320GB WD3200BPVT-22ZEST0, ML320S, 4K drive SATA 8MB LF F/W: 01.01A01	KH.32008.022
	HDD SEAGATE 2.5" 5400rpm 320GB ST9320310AS,9RN132-188, Cameron 320G/P SATA 8MB LF F/W:0001SDM1	KH.32001.019
	HDD TOSHIBA 2.5" 5400rpm 500GB MK5065GSX,Capricorn BS, 320G/P SATA 8MB LF F/W:GJ001J	KH.50004.002
	HDD HGST 2.5" 5400rpm 500GB HTS545050B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.50007.010
	HDD WD 2.5" 5400rpm 500GB WD5000BEVT-22A0RT0, ML320M,WD SATA 8MB LF F/W:01.01A01	KH.50008.017
	HDD SEAGATE 2.5" 5400rpm 500GB ST9500325AS,9HH134-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.50001.017
	HDD WD 2.5" 5400rpm 640GB WD6400BEVT-22A0RT0, ML320 SATA 8MB LF F/W:01.01A01	KH.64008.004
	HDD TOSHIBA 2.5" 5400rpm 640GB MK6465GSX,Capricorn BS,320G/P SATA 8MB LF F/W:GJ002J	KH.64004.001
	HDD WD 2.5" 5400rpm 750GB WD7500BPVT-22HXZT1, ML375M, 4K drive SATA 8MB LF F/W:01.01A01	KH.75008.009
	HDD SEAGATE 2.5" 5400rpm 250GB ST92503010AS, Sapta 1, 7mmZH, 250G/P SATA 8MB LF F/W:0001SDM1	KH.25001.018
	HDD BRACKET	33.R6Z07.002
	HDD FRONT BRACKET	33.R6Z07.003

Category	Description	P/N
KEYBOARD		
	Keyboard ACER AC4T_A10B AC4T 86KS Black Arabic Texture	KB.I140A.204
	Keyboard ACER AC4T_A10B AC4T 87KS Black Belgium Texture	KB.I140A.205
	Keyboard ACER AC4T_A10B AC4T 87KS Black Brazilian Portuguese Texture	KB.I140A.206
	Keyboard ACER AC4T_A10B AC4T 87KS Black CZ/SK Texture	KB.I140A.207
	Keyboard ACER AC4T_A10B AC4T 86KS Black Chinese Texture	KB.I140A.208
	Keyboard ACER AC4T_A10B AC4T 87KS Black Danish Texture	KB.I140A.209
	Keyboard ACER AC4T_A10B AC4T 87KS Black FR/Arabic Texture	KB.I140A.210
	Keyboard ACER AC4T_A10B AC4T 87KS Black French Texture	KB.I140A.211
	Keyboard ACER AC4T_A10B AC4T 87KS Black German Texture	KB.I140A.212
	Keyboard ACER AC4T_A10B AC4T 86KS Black Greek Texture	KB.I140A.213
	Keyboard ACER AC4T_A10B AC4T 87KS Black Hungarian Texture	KB.I140A.214
	Keyboard ACER AC4T_A10B AC4T 87KS Black Italian Texture	KB.I140A.215
	Keyboard ACER AC4T_A10B AC4T 91KS Black Japanese Texture	KB.I140A.216
	Keyboard ACER AC4T_A10B AC4T 86KS Black Korean Texture	KB.I140A.217
	Keyboard ACER AC4T_A10B AC4T 87KS Black Nordic Texture	KB.I140A.218
	Keyboard ACER AC4T_A10B AC4T 87KS Black Norwegian Texture	KB.I140A.219
	Keyboard ACER AC4T_A10B AC4T 87KS Black Portuguese Texture	KB.I140A.220
	Keyboard ACER AC4T_A10B AC4T 86KS Black Russian Texture	KB.I140A.221
	Keyboard ACER AC4T_A10B AC4T 87KS Black SLO/CRO Texture	KB.I140A.222
	Keyboard ACER AC4T_A10B AC4T 87KS Black Spanish Texture	KB.I140A.223
	Keyboard ACER AC4T_A10B AC4T 87KS Black Sweden Texture	KB.I140A.224
	Keyboard ACER AC4T_A10B AC4T 87KS Black Swiss/G Texture	KB.I140A.225
	Keyboard ACER AC4T_A10B AC4T 86KS Black Thailand Texture	KB.I140A.226
	Keyboard ACER AC4T_A10B AC4T 87KS Black Turkish Texture	KB.I140A.227
	Keyboard ACER AC4T_A10B AC4T 87KS Black UK Texture	KB.I140A.228
	Keyboard ACER AC4T_A10B AC4T 86KS Black US International Texture	KB.I140A.229
	Keyboard ACER AC4T_A10B AC4T 86KS Black US International w/ Hebrew Texture	KB.I140A.230
	Keyboard ACER AC4T_A10B AC4T 87KS Black US w/ Canadian French Texture	KB.I140A.231
LCD		
	LCD MODULE 14" LED GLARE IMR W/CCD, ANTENNA*2 - BLACK	6M.R6Z07.002
	LED LCD LPL 14" WXGA Glare LP140WH1-TLA2 LF 220nit 8ms 500:1	LK.14008.004
	LED LCD SAMSUNG 14" WXGA Glare LTN140AT01-G03 LF 220nit 8ms 500:1	LK.14006.011
	LED LCD AUO 14" WXGA Glare B140XW01 V8 0A LF 220nit 8ms 500:1 (power saving)	LK.14005.010
	LED LCD CMI 14" WXGA Glare BT140GW01 V6 LF 220nit 8ms 600:1	LK.1400D.008

Category	Description	P/N
	LCD COVER W/ ANT - IMR BLACK	60.R6Z07.009
	ANTENNA - WIMAX	50.R6Z07.002
	LCD BEZEL FOR CCD	60.R6Z07.010
	LCD BRACKET W/ HINGE - L	33.R6Z07.004
	LCD BRACKET W/ HINGE - R	33.R6Z07.005
	LCD CABLE	50.R6Z07.004
	Chicony 1.3M CH9665SN (CNF9157)	AM.21400.067
	Suyin 1.3M SY9665SN	AM.21400.068
	Liteon 1.3M LT9665AL (09P2SF119)	AM.21400.069
LCD		
	LCD MODULE 14" LED GLARE IMR W/CCD, ANTENNA*2 - BROWN	6M.R6Z07.003
	LED LCD LPL 14" WXGA Glare LP140WH1-TLA2 LF 220nit 8ms 500:1	LK.14008.004
	LED LCD SAMSUNG 14" WXGA Glare LTN140AT01-G03 LF 220nit 8ms 500:1	LK.14006.011
	LED LCD AUO 14" WXGA Glare B140XW01 V8 0A LF 220nit 8ms 500:1 (power saving)	LK.14005.010
	LED LCD CMI 14" WXGA Glare BT140GW01 V6 LF 220nit 8ms 600:1	LK.1400D.008
	LCD COVER W/ ANT - IMR BROWN	60.R6Z07.011
	ANTENNA - WIMAX	50.R6Z07.002
	LCD BEZEL FOR CCD	60.R6Z07.010
	LCD BRACKET W/ HINGE - L	33.R6Z07.004
	LCD BRACKET W/ HINGE - R	33.R6Z07.005
	LCD CABLE	50.R6Z07.004
	Chicony 1.3M CH9665SN (CNF9157)	AM.21400.067
	Suyin 1.3M SY9665SN	AM.21400.068
	Liteon 1.3M LT9665AL (09P2SF119)	AM.21400.069

Category	Description	P/N
LCD		
	LCD MODULE 14" LED GLARE IMR W/CCD, ANTENNA*2 - RED	6M.R6Z07.004
	LED LCD LPL 14" WXGA Glare LP140WH1-TLA2 LF 220nit 8ms 500:1	LK.14008.004
	LED LCD SAMSUNG 14" WXGA Glare LTN140AT01-G03 LF 220nit 8ms 500:1	LK.14006.011
	LED LCD AUO 14" WXGA Glare B140XW01 V8 0A LF 220nit 8ms 500:1 (power saving)	LK.14005.010
	LED LCD CMI 14" WXGA Glare BT140GW01 V6 LF 220nit 8ms 600:1	LK.1400D.008
	LCD COVER W/ ANT - IMR RED	60.R6Z07.012
	ANTENNA - WIMAX	50.R6Z07.002
	LCD BEZEL FOR CCD	60.R6Z07.010
	LCD BRACKET W/ HINGE - L	33.R6Z07.004
	LCD BRACKET W/ HINGE - R	33.R6Z07.005
	LCD CABLE	50.R6Z07.004
	Chicony 1.3M CH9665SN (CNF9157)	AM.21400.067
	Suyin 1.3M SY9665SN	AM.21400.068
	Liteon 1.3M LT9665AL (09P2SF119)	AM.21400.069
MAINBOARD		
	MAIN BOARD UMA GL40, W/CARD READER,MIC	MB.R5U06.001
MEMORY		
	Memory ELPIDA SO-DIMM DDRIII 1333 1GB EBJ10UE8BDS0-DJ-F LF 128*8 0.065um	KN.1GB09.015
	Memory SAMSUNG SO-DIMM DDRIII 1333 1GB M471B2873FHS-CH9 LF 128*8 46nm	KN.1GB0B.035
	Memory HYNIX SO-DIMM DDRIII 1333 1GB HMT112S6TFR8C-H9 LF 128*8 0.055um	KN.1GB0G.026
	Memory KINGSTON SO-DIMM DDRIII 1333 1GB ACR128X64D3S1333C9 LF 128*8 0.065um	KN.1GB07.004
	Memory KINGSTON SO-DIMM DDRIII 1333 2GB ACR256X64D3S1333C9 LF 128*8 0.065um	KN.2GB07.004
	Memory ELPIDA SO-DIMM DDRIII 1333 2GB EBJ21UE8BFU0-DJ-F LF 128*8 0.065um	KN.2GB09.009
	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5673FH0-CH9 LF 128*8 46nm	KN.2GB0B.023

Category	Description	P/N
	Memory SAMSUNG SO-DIMM DDRIII 1333 2GB M471B5773CHS-CH9 LF 256*8 46nm	KN.2GB0B.026
	Memory HYNIX SO-DIMM DDRIII 1333 2GB HMT125S6TFR8C-H9 LF 128*8 0.055um	KN.2GB0G.016
HEATSINK		
	THERMAL MODULE 35W UMA	60.R6Z07.013
SPEAKER		
	SPEAKER	23.R6Z07.001
MISCELLANEOUS		
	RUBBER FOOT - REAR	47.PSR07.003
	LOWER CASE RUBBER FOOT - F	47.PSR07.001
	LCD RUBBER - UP	47.R6Z07.001
	LCD RUBBER - MID	47.R6Z07.002
	LCD SCREW MYLAR	47.R6Z07.003
	TP PROTECT MYLAR	47.R6Z07.004

Screw List

Category	Description	P/N
SCREW		
	SCREW M2-0.4*2-I(BNI)(NYLOK)IRON	86.W4107.002
	SCREW M2.0*3.0-I(BKAG)(NYLOK IRON)	86.ARE07.002
	SCREW M3*0.5+3.5I	86.N1407.007
	SCREW M2.5*4.0-I(NI)(NYLOK)	86.R6Z07.001
	SCREW M2.0*5-I(NI)(NYLOK)	86.T23V7.010
	SCREW M2.0*3.95-I(BNI)(NYLOK)	86.R6Z07.002
	SCREW M2.5*6.5-I(BZN(NYLOK-RED)	86.ARE07.001
	SCREW M2.5*4.0-I(BKAG)(NYLOK)IRON	86.PSR07.001

Model Definition and Configuration

Aspire 4333

Model	RO	Country	Acer Part No	Description
AS4333-901G32Mncc	EMEA	Middle East	LX.R6Z0 8.001	AS4333-901G32Mncc EM W7ST32EMASME2 MC UMACcc_3 1*1G/320/BT/6L2.2/2R/CB_bgn_1.3C_HG_ARA1
AS4333-901G32Mnkk	EMEA	Middle East	LX.R5U 08.002	AS4333-901G32Mnkk EM W7ST32EMASME2 MC UMACkk_3 1*1G/320/BT/6L2.2/2R/CB_bgn_1.3C_HG_ARA1
AS4333-901G32Mnrr	EMEA	Middle East	LX.R710 8.001	AS4333-901G32Mnrr EM W7ST32EMASME2 MC UMACrr_3 1*1G/320/BT/6L2.2/2R/CB_bgn_1.3C_HG_ARA1
AS4333-902G25Mnkk	EMEA	Spain	LX.R5U 02.006	AS4333-902G25Mnkk W7HP64ASES1 MC UMACkk_3 1*2G/250/6L2.2/2R/CB_bgn_1.3C_HG_ES51
AS4333-902G25Mnkk	WW	WW	S2.R5U 02.002	AS4333-902G25Mnkk W7HP64ASWW1 MC UMACkk_3 2*1G/250/BT/6L2.2/2R/CB_bgn_1.3C_HG_ES62
AS4333-902G50Mnkk	EMEA	Spain	LX.R5U 02.005	AS4333-902G50Mnkk W7HP64ASES1 MC UMACkk_3 1*2G/500_L/6L2.2/2R/CB_bgn_1.3C_HG_ES51
AS4333-906G50Mnrr	WW	GCTWN	S2.R710 2.001	AS4333-906G50Mnrr W7HP64ASWW1 MC UMACrr_3 2G+4G/500_L/BT/6L2.2/2R/CB_bgn_1.3C_HG_ES61
AS4333-908G50Mncc	WW	GCTWN	S2.R6Z0 2.001	AS4333-908G50Mncc W7HP64ASWW1 MC UMACcc_3 2*4G/500_L/BT/6L2.2/2R/CB_bgn_1.3C_HG_ES61
AS4333-T352G25Mnkk	AAP	Singapore	LX.R5U 02.002	AS4333-T352G25Mnkk W7HP64ASSG1 MC UMACkk_3 1*2G/250/BT/6L2.2/2R/CB_bgn_1.3C_HG_ZH31
AS4333-T352G25Mnkk	AAP	Singapore	LX.R5U 02.001	AS4333-T352G25Mnkk W7HP64ASSG1 MC UMACkk_3 1*2G/250/BT/6L2.2/2R/CB_bgn_1.3C_HG_ES61
AS4333-T352G32Mnkk	AAP	Singapore	LX.R5U 02.004	AS4333-T352G32Mnkk W7HP64ASSG1 MC UMACkk_3 1*2G/320/BT/6L2.2/2R/CB_bgn_1.3C_HG_ZH31
AS4333-T352G32Mnkk	AAP	Singapore	LX.R5U 02.003	AS4333-T352G32Mnkk W7HP64ASSG1 MC UMACkk_3 1*2G/320/BT/6L2.2/2R/CB_bgn_1.3C_HG_ES61
AS4333-T352G32Mnkk	PA	ACLA-Spain	LX.R5U 08.001	AS4333-T352G32Mnkk EM W7ST32EMASEA1 MC UMACkk_3 1*2G/320/6L2.2/2R/CB_bgn_1.3C_HG_ES51
AS4333-T352G32Mnkk	PA	ACLA-Spain	LX.R5U 0C.003	AS4333-T352G32Mnkk LINPUS MAEA4 UMACkk_3 1*2G/320/6L2.2/2R/CB_bgn_1.3C_HG_XS31

Model	RO	Country	Acer Part No	Description
AS4333-T352G32Mnkk	PA	ACLA-Spain	LX.R5U 0C.002	AS4333-T352G32Mnkk LINPUS MAEA1 UMACKk_3 1*2G/320/6L2.2/2R/ CB_bgn_1.3C_HG_XS41
AS4333-T352G32Mnkk	PA	ACLA-Spain	LX.R5U 0C.001	AS4333-T352G32Mnkk LINPUS MAEA3 UMACKk_3 1*2G/320/6L2.2/2R/ CB_bgn_1.3C_HG_XS41
AS4333-T352G32Mnkk	PA	Chile	LX.R5U 0C.004	AS4333-T352G32Mnkk LINPUS MACL3 UMACKk_3 1*2G/320/6L2.2/2R/ CB_bgn_1.3C_HG_XS41
AS4333-T354G32Mnkk	WW	WW	S2.R5U 02.003	AS4333-T354G32Mnkk W7HP64ASWW1 MC UMACKk_3 2*2G/320/BT/6L2.2/2R/ CB_bgn_1.3C_HG_ES62
AS4333-T354G50Mnkk	WW	WW	S2.R5U 02.001	AS4333-T354G50Mnkk W7HP64ASWW1 MC UMACKk_3 2*2G/500_L/BT/6L2.2/2R/ CB_bgn_1.3C_HG_ES62

Model	Country	Acer Part No	CPU	Memory 1	Memory 2	HDD 1(GB)
AS4333-901G32Mncc	Middle East	LX.R6Z 08.001	CM900	SO1GBIII10	N	N320GB5. 4KS_4K
AS4333-901G32Mnkk	Middle East	LX.R5U 08.002	CM900	SO1GBIII10	N	N320GB5. 4KS_4K
AS4333-901G32Mnrr	Middle East	LX.R71 08.001	CM900	SO1GBIII10	N	N320GB5. 4KS_4K
AS4333-902G25Mnkk	Spain	LX.R5U 02.006	CM900	SO2GBIII10	N	N250GB5. 4KS
AS4333-902G25Mnkk	WW	S2.R5U 02.002	CM900	SO1GBIII10	SO1GBIII10	N250GB5. 4KS
AS4333-902G50Mnkk	Spain	LX.R5U 02.005	CM900	SO2GBIII10	N	N500GB5. 4KS
AS4333-906G50Mnrr	GCTWN	S2.R71 02.001	CM900	SO2GBIII10	SO4GBIII10	N500GB5. 4KS
AS4333-908G50Mncc	GCTWN	S2.R6Z 02.001	CM900	SO4GBIII10	SO4GBIII10	N500GB5. 4KS
AS4333-T352G25Mnkk	Singapore	LX.R5U 02.002	CMT3500	SO2GBIII10	N	N250GB5. 4KS
AS4333-T352G25Mnkk	Singapore	LX.R5U 02.001	CMT3500	SO2GBIII10	N	N250GB5. 4KS
AS4333-T352G32Mnkk	Singapore	LX.R5U 02.004	CMT3500	SO2GBIII10	N	N320GB5. 4KS
AS4333-T352G32Mnkk	Singapore	LX.R5U 02.003	CMT3500	SO2GBIII10	N	N320GB5. 4KS
AS4333-T352G32Mnkk	ACLA-Spain	LX.R5U 08.001	CMT3500	SO2GBIII10	N	N320GB5. 4KS_4K
AS4333-T352G32Mnkk	ACLA-Spain	LX.R5U 0C.003	CMT3500	SO2GBIII10	N	N320GB5. 4KS
AS4333-T352G32Mnkk	ACLA-Spain	LX.R5U 0C.002	CMT3500	SO2GBIII10	N	N320GB5. 4KS

Model	Country	Acer Part No	CPU	Memory 1	Memory 2	HDD 1(GB)
AS4333-T352G32Mnkk	ACLA-Spain	LX.R5U 0C.001	CMT3500	SO2GBIII10	N	N320GB5.4KS
AS4333-T352G32Mnkk	Chile	LX.R5U 0C.004	CMT3500	SO2GBIII10	N	N320GB5.4KS
AS4333-T354G32Mnkk	WW	S2.R5U 02.003	CMT3500	SO2GBIII10	SO2GBIII10	N320GB5.4KS_4K
AS4333-T354G50Mnkk	WW	S2.R5U 02.001	CMT3500	SO2GBIII10	SO2GBIII10	N500GB5.4KS

Aspire 4733Z

Model	RO	Country	Acer Part No	Description		
AS4733Z-452G25Mncc	WW	GCTWN	S2.R890 2.001	AS4733Z-452G25Mncc W7HP64ASWW1 MC UMACcc_3 1*2G/250/BT/6L2.2/2R/ CB_bgn_1.3C_GEc_ES61		
AS4733Z-452G25Mncc	WW	WW	S2.R890 2.002	AS4733Z-452G25Mncc W7HP64ASWW1 MC UMACcc_3 1*2G/250/BT/6L2.2/2R/ CB_bgn_1.3C_GEc_ES62		
AS4733Z-452G32Mncc	CHINA	China	LX.R890 C.001	AS4733Z-452G32Mncc LINPUS MACN1 UMACcc_3 1*2G/320/6L2.2/2R/ CB_bgn_1.3C_GEc_ZH41		
AS4733Z-452G32Mnkk	CHINA	China	LX.R5T0 C.001	AS4733Z-452G32Mnkk LINPUS MACN1 UMACkk_3 1*2G/320/6L2.2/2R/ CB_bgn_1.3C_GEk_ZH41		
AS4733Z-452G32Mnrr	CHINA	China	LX.R8A0 C.001	AS4733Z-452G32Mnrr LINPUS MACN1 UMACrr_3 1*2G/320/6L2.2/2R/ CB_bgn_1.3C_GEr_ZH41		
AS4733Z-452G50Mnkk	WW	GCTWN	S2.R5T0 2.001	AS4733Z-452G50Mnkk W7HP64ASWW1 MC UMACkk_3 1*2G/500_L/BT/6L2.2/2R/ CB_bgn_1.3C_GEk_ES61		
AS4733Z-452G50Mnkk	WW	WW	S2.R5T0 2.002	AS4733Z-452G50Mnkk W7HP64ASWW1 MC UMACkk_3 1*2G/500_L/BT/6L2.2/2R/ CB_bgn_1.3C_GEk_ES62		
AS4733Z-453G64Mnrr	WW	WW	S2.R8A0 C.001	AS4733Z-453G64Mnrr LINPUS MAWW1 UMACrr_3 1G+2G/640/6L2.2/2R/ CB_bgn_1.3C_GEr_ES61		
AS4733Z-454G32Mnrr	WW	GCTWN	S2.R8A0 2.001	AS4733Z-454G32Mnrr W7HP64ASWW1 MC UMACrr_3 2*2G/320/BT/6L2.2/2R/ CB_bgn_1.3C_GEr_ES61		
AS4733Z-454G32Mnrr	WW	WW	S2.R8A0 2.002	AS4733Z-454G32Mnrr W7HP64ASWW1 MC UMACrr_3 2*2G/320_5.4k_4k/BT/6L2.2/2R/ CB_bgn_1.3C_GEr_ES62		

Model	Country	Acer Part No	CPU	Memory 1	Memory 2	HDD 1(GB)
AS4733Z-452G25Mncc	GCTWN	S2.R89 02.001	PMDT4500	SO2GBIII10	N	N250GB5.4KS

Model	Country	Acer Part No	CPU	Memory 1	Memory 2	HDD 1(GB)
AS4733Z-452G25Mncc	WW	S2.R89 02.002	PMDT4500	SO2GBIII10	N	N250GB5.4KS
AS4733Z-452G32Mncc	China	LX.R89 0C.001	PMDT4500	SO2GBIII10	N	N320GB5.4KS
AS4733Z-452G32Mnkk	China	LX.R5T 0C.001	PMDT4500	SO2GBIII10	N	N320GB5.4KS
AS4733Z-452G32Mnrr	China	LX.R8A 0C.001	PMDT4500	SO2GBIII10	N	N320GB5.4KS
AS4733Z-452G50Mnkk	GCTWN	S2.R5T 02.001	PMDT4500	SO2GBIII10	N	N500GB5.4KS
AS4733Z-452G50Mnkk	WW	S2.R5T 02.002	PMDT4500	SO2GBIII10	N	N500GB5.4KS
AS4733Z-453G64Mnrr	WW	S2.R8A 0C.001	PMDT4500	SO1GBIII10	SO2GBIII10	N640GB5.4KS
AS4733Z-454G32Mnrr	GCTWN	S2.R8A 02.001	PMDT4500	SO2GBIII10	SO2GBIII10	N320GB5.4KS _4K
AS4733Z-454G32Mnrr	WW	S2.R8A 02.002	PMDT4500	SO2GBIII10	SO2GBIII10	N320GB5.4KS _4K

Test Compatible Components

This computer's compatibility is tested and verified by Acer's internal testing department. All of its system functions are tested under Windows® 7 with backwards compatibility to Windows® XP.

Refer to the following lists for components, adapter cards, and peripherals which have passed these tests. Regarding configuration, combination and test procedures, please refer to the Aspire 4333 Compatibility Test Report released by the Acer Mobile System Testing Department.

Vendor	Type	Description	P/N
Adapter			
Chicony Power	65W	Adapter Chicony Power 65W 19V 1.7x5.5x11 Yellow CPA09-A065N1, LV5, low profile LED LF	AP.0650A.017
DELTA	65W	Adapter DELTA 65W 19V 1.7x5.5x11 Yellow ADP-65JH DB A, LV5 LED LF	AP.06501.026
DELTA	65W	Adapter DELTA 65W 19V 1.7x5.5x11 Yellow ADP-65VH BA, LV5, Low profile LED LF	AP.06501.033
HIPRO	65W	Adapter HIPRO 65W 19V 1.7x5.5x11 Yellow HP-A0652R3B 1LF, LV5 LED LF	AP.0650A.012
LITE-ON	65W	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-22AC LV5 LED LF	AP.06503.024
LITE-ON	65W	Adapter LITE-ON 65W 19V 1.7x5.5x11 Yellow PA-1650-69AW, LV5, Low profile LED LF	AP.06503.029
Audio Codec			
Realtek	ALC272X	Realtek Audio Codec ALC272X	LZ.21000.045
Battery			
PANASONIC	6CELL2.2	Battery PANASONIC AS10D Li-Ion 3S2P PANASONIC 6 cell 4400mAh Main COMMON ID:AS10D51	BT.00605.062
SAMSUNG	6CELL2.2	Battery SAMSUNG AS10D Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D61	BT.00606.008
SANYO	6CELL2.2	Battery SANYO AS10D Li-Ion 3S2P SANYO 6 cell 4400mAh Main COMMON ID:AS10D31	BT.00603.111
SIMPLO	6CELL2.2	Battery SIMPLO AS10D Li-Ion 3S2P PANASONIC 6 cell 4400mAh Main COMMON ID:AS10D71	BT.00607.125
SIMPLO	6CELL2.2	Battery SIMPLO AS10D Li-Ion 3S2P LGC 6 cell 4400mAh Main COMMON ID:AS10D73	BT.00607.126
SIMPLO	6CELL2.2	Battery SIMPLO AS10D Li-Ion 3S2P SAMSUNG 6 cell 4400mAh Main COMMON ID:AS10D	BT.00607.127
SONY	6CELL2.2	Battery SONY AS10D Li-Ion 3S2P SONY 6 cell 4400mAh Main COMMON ID:AS10D41	BT.00604.049
Bluetooth			
Foxconn	BT 2.1	Foxconn Bluetooth ATH AR3011	BH.21100.005

Vendor	Type	Description	P/N
Foxconn	BT 2.1	Foxconn Bluetooth BRM 2046 BT2.1 (T60H928.33 Ver.3/PCB V015) HSF	BH.21100.006
Foxconn	BT 2.1	Foxconn Bluetooth BRM 2070 (T77H114.01)	BH.21100.007
Foxconn	BT 3.0	Foxconn Bluetooth ATH AR3011 (BT3.0)	BH.21100.009
Foxconn	BT 3.0	Foxconn Bluetooth BRM 2070 (T77H114.01) BT 3.0	BH.21100.010
Camera			
Chicony	1.3M	Chicony 1.3M CH9665SN (CNF9157)	AM.21400.067
Liteon	1.3M	Liteon 1.3M LT9665AL (09P2SF119)	AM.21400.069
Liteon	1.3M	Liteon 1.3M LT6AASP(09P2BF127)	AM.21400.070
Suyin	1.3M	Suyin 1.3M SY9665SN	AM.21400.068
Card Reader			
	2-in-1 card reader	2-in-1 card reader	CR.21500.030
CPU			
INTEL	CM900	CPU Intel Celeron 900 PGA 2.2G 1M 800 35W	KC.N0001.900
INTEL	CMT3500	CPU Intel Celeron T3500 PGA 2.1G 1M 800 35W	KC.35001.CMT
INTEL	PMDT4500	CPU Intel Pentium Dual-Core T4500 2.3G 1M 800	KC.45001.DTP
HDD			
HGST	N160GB5.4KS	HDD HGST 2.5" 5400rpm 160GB HTS545016B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.16007.026
HGST	N250GB5.4KS	HDD HGST 2.5" 5400rpm 250GB HTS545025B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.25007.016
HGST	N320GB5.4KS	HDD HGST 2.5" 5400rpm 320GB HTS545032B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.32007.008
HGST	N500GB5.4KS	HDD HGST 2.5" 5400rpm 500GB HTS545050B9A300 Panther B SATA LF F/W:C60F Disk imbalance criteria = 0.014g-cm	KH.50007.010
SEAGATE	N160GB5.4KS	HDD SEAGATE 2.5" 5400rpm 160GB ST9160314AS,9HH13C-189, Seagate(new pcb) SATA 8MB LF F/W:0001SDM1	KH.16001.045
SEAGATE	N250GB5.4KS	HDD SEAGATE 2.5" 5400rpm 250GB ST9250315AS, 9HH132-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.25001.019
SEAGATE	N320GB5.4KS	HDD SEAGATE 2.5" 5400rpm 320GB ST9320310AS,9RN132-188, Cameron 320G/P SATA 8MB LF F/W:0001SDM1	KH.32001.019
SEAGATE	N500GB5.4KS	HDD SEAGATE 2.5" 5400rpm 500GB ST9500325AS,9HH134-189, Wyatt with new pcb SATA 8MB LF F/W:0001SDM1	KH.50001.017
TOSHIBA	N160GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 160GB MK1665GSX, Capricorn BS, 320G/P SATA 8MB LF F/W:GJ002J	KH.16004.008

Vendor	Type	Description	P/N
TOSHIBA	N250GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 250GB MK2565GSX, Capricorn BS, 320G/P SATA 8MB LF F/W:GJ002J	KH.25004.005
TOSHIBA	N320GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 320GB Capricorn BS ,MK3265GSX SATA 8MB LF F/ W:GJ002J	KH.32004.004
TOSHIBA	N500GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 500GB MK5065GSX,Capricorn BS, 320G/P SATA 8MB LF F/W:GJ002J	KH.50004.002
TOSHIBA	N640GB5.4KS	HDD TOSHIBA 2.5" 5400rpm 640GB MK6465GSX,Capricorn BS,320G/P SATA 8MB LF F/W:GJ002J	KH.64004.001
WD	N160GB5.4KS	HDD WD 2.5" 5400rpm 160GB WD1600BEVT-22A23T0 , WD, ML320S SATA 8MB LF F/ W:01.01A01	KH.16008.027
WD	N250GB5.4KS	HDD WD 2.5" 5400rpm 250GB WD2500BEVT-22A23T0, WD, ML320S SATA 8MB LF F/ W:01.01A01.	KH.25008.025
WD	N320GB5.4KS _4K	HDD WD 2.5" 5400rpm 320GB WD3200BPVT-22ZEST0, ML320S, 4K drive SATA 8MB LF F/ W: 01.01A01	KH.32008.022
WD	N500GB5.4KS	HDD WD 2.5" 5400rpm 500GB WD5000BEVT-22A0RT0, ML320M,WD SATA 8MB LF F/ W:01.01A01	KH.50008.017
WD	N640GB5.4KS	HDD WD 2.5" 5400rpm 640GB WD6400BEVT-22A0RT0, ML320 SATA 8MB LF F/ W:01.01A01	KH.64008.004
WD	N640GB5.4KS	HDD WD 2.5" 5400rpm 640GB WD6400BPVT-22HXZT1, ML375M SATA 8MB LF F/W: 01.01A01	KH.64008.005
WD	N750GB5.4KS	HDD WD 2.5" 5400rpm 750GB WD7500BPVT-22HXZT1, ML375M, 4K drive SATA 8MB LF F/ W:01.01A01	KH.75008.009
Keyboard			
ACER	AC4T_A10B	Keyboard ACER AC4T_A10B AC4T Internal 14 Standard Black Y2010 Acer Legend Texture	KB.I140A.202
LAN			
Broadcom	BCM57780	Broadcom BCM57780	NI.22400.047
LCD			
AUO	NLED14WXG AG	LED LCD AUO 14" WXGA Glare B140XW01 V8 0A LF 220nit 8ms 500:1 (power saving)	LK.14005.010
CMI	NLED14WXG AG	LED LCD CMI 14" WXGA Glare BT140GW01 V6 LF 220nit 8ms 600:1	LK.1400D.008
LPL	NLED14WXG AG	LED LCD LPL 14" WXGA Glare LP140WH1-TLA2 LF 220nit 8ms 500:1	LK.14008.004
SAMSUNG	NLED14WXG AG	LED LCD SAMSUNG 14" WXGA Glare LTN140AT01-G03 LF 220nit 8ms 500:1	LK.14006.011
SAMSUNG	NLED14WXG AG	LED LCD SAMSUNG 14" WXGA Glare LTN140AT01-G04 LF 220nit 8ms 500:1	LK.14006.015

Vendor	Type	Description	P/N
MEM			
NONE	SO1GBIII10	Memory NONE REG-ECC DDRIII 1066 1GB phantom p/n LF	KN.1GB00.003
NONE	SO2GBIII10	Memory NONE SO-DIMM DDRIII 1066 2GB dummy 1066 LF	KN.2GB00.001
NB Chipset			
INTEL	GL40(A1)	NB Chipset Intel CS GL40NB A1	KI.G4501.009
ODD			
HLDS	NSM8XS	ODD HLDS Super-Multi DRIVE 12.7mm Tray DL 8X GT32N (R5-2) LF W/O bezel SATA with Renesas solution + PCC LD (HF + Windows 7)	KU.0080D.055
PANASONIC	NSM8XS	ODD PANASONIC Super-Multi DRIVE 12.7mm Tray DL 8X UJ8A0 LF W/O bezel SATA (HF + Windows 7) Foxconn Yentai Factory	KU.00807.075
PLDS	NSM8XS	ODD PLDS Super-Multi DRIVE 12.7mm Tray DL 8X DS-8A5SH LF+HF W/O bezel SATA With TI + Rohm Solution (HF + Windows 7)	KU.0080F.014
SONY	NSM8XS	ODD SONY Super-Multi DRIVE 12.7mm Tray DL 8X AD-7585H LF W/O bezel SATA (HF + Windows 7)	KU.0080E.027
TOSHIBA	NSM8XS	ODD TOSHIBA Super-Multi DRIVE 12.7mm Tray DL 8X TS-L633F LF W/O bezel SATA (HF + Windows 7)	KU.00801.040
SB Chipset			
INTEL	ICH9M	SB Chipset Intel CS ICH9M	KI.80101.030
Software			
	McAfee	Antivirus application McAfee	SR.23900.001
VGA Chip			
None	UMA	UMA (Intel)	KI.23200.038
WiFi Antenna			
WNC	PIFA	PIFA	LZ.23500.006
Wireless LAN			
Foxconn	3rd WiFi 2x2 BGN	Foxconn Wireless LAN Broadcom 43225 2x2 BGN (HM) T77H103.00	NI.23600.066
Foxconn	3rd WiFi 2x2 BGN	Foxconn Wireless LAN Atheros HB97 2x2 BGN (HM)	NI.23600.072
Liteon	3rd WiFi 2x2 BGN	Liteon Wireless LAN Atheros HB97 2x2 BGN (HM) WN6603AH	NI.23600.073

Online Support Information

This section describes online technical support services available to help you repair your Acer Systems.

If you are a distributor, dealer, ASP or TPM, please refer your technical queries to your local Acer branch office. Acer Branch Offices and Regional Business Units may access our website. However some information sources will require a user i.d. and password. These can be obtained directly from Acer CSD Taiwan.

Acer's Website offers you convenient and valuable support resources whenever you need them.

In the Technical Information section you can download information on all of Acer's Notebook, Desktop and Server models including:

- Service guides for all models
- Bios updates
- Software utilities
- Spare parts lists
- TABs (Technical Announcement Bulletin)

For these purposes, we have included an Acrobat File to facilitate the problem-free downloading of our technical material.

Also contained on this website are:

- Returned material authorization procedures
- An overview of all the support services we offer, accompanied by a list of telephone, fax and email contacts for all your technical queries.

We are always looking for ways to optimize and improve our services, so if you have any suggestions or comments, please do not hesitate to communicate these to us.

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